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THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

THE WOLSELEY BUILDING, PICCADILLY: DETAIL OF ENTRANCE.
W. CURTIS GREEN, F.R.I.B.A., ARCHITECT.
(See article on page 58.)

27-29 Tothill Street, Westminster, S.W.1.

Current Architecture. 140.—New Premises for Wolseley Motors, Ltd., Piccadilly, London

W. Curtis Green, F.R.I.B.A., Architect

This building is generally regarded by architects as an important contribution to the development of street architecture. It illustrates a very sound use of the classic order in a modern building of large scale, and shows a façade that combines dignity with elegance each in an uncommon degree. (*See article on page* 58).

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

Wednesday, January 4, 1922 Volume LV. No. 1409

The Good Time Coming

ARCHITECTS do not consider that the year 1921 can be compared to an argosy "laden with golden grain," nor to a richly rubricated chapter in the history of their art. It was, in fact, a year of dismal depression, and is not exhilarating in the retrospect. Hardly anything better can be said of it than that one is grateful it was no worse. It might have brought us tumults—even revolutions; but, on the whole, there has been a marked exhibition of a conciliatory temper among both employers and employed. On each side it has been recognized that, to rescue our country from a perilous economic situation, self-sacrifice is necessary. Workers have agreed to accept reductions of wages, and employers have been running their works without profit, or even at a loss, with the object of setting in motion the wheels of industry, and of lessening the numbers of the unemployed. It is even plausibly stated that rates and taxes are coming down, and that the Postmaster-General is in a repentant mood as to his exorbitant charges for stamps and telephone calls. And even railway rates have been at last reconsidered. It is greatly to be deplored that the building-trade-unionists refused so obdurately to co-operate with the employers in promoting Dr. Macnamara's scheme for absorbing some 50,000 ex-Service men. This refusal widened a breach that an amicable compliance with the Government request might have been the means of bridging, but this unique opportunity for co-operation in a good cause was sacrificed to the men's mean suspicion that the real object of the scheme was to smash the unions. Nor can it be said that the so-called Builders' Parliament has done much to promote that mutual goodwill among employers and employed which is a factor essential to the prosperity of the industry, whether economically or as a matter of craftsmanship.

In point of fact, the relationship between capital and labour is hardly more cordial to-day than it was before the war, in spite of many well-intentioned endeavours on the part of enlightened employers to infuse into it a more humanely sympathetic spirit. As we have so often reiterated, here is an opportunity for excellent social service: the architect could, if he would, mediate beneficially between employers and operatives; but his tardy entrance into that field of perpetual strife the Builders' Parliament has hitherto supplied but little evidence to support this plea.

To restore prosperity to the building industry, however, and to bring the architect a steady supply of clients, something more is required than even the most perfect accord or the most cordial co-operation between masters and men. Not even bed-rock or pre-war prices for materials and labour would work this miracle. For the causes of trade depression we must look much deeper. We really must not forget, as so many of us seem temporarily to do, that during the world-war millions of men ceased to produce useful commodities, and engaged in wholesale destruction, or in making the means thereof; nor forget that it must certainly take a considerable time to make up for arrears into which we then fell in every department of useful activity—in agriculture and building as well as in the manufactures.

It might well be supposed that to make up for those years of destruction there would immediately set in a period of furious activity. It is a reasonable supposition. But it overlooks the fact that protracted war exhausts energy, mental as well as physical, and that, when peace dawned, tired humanity was for the moment unequal to the tremendous task of reorganizing and co-ordinating afresh the world's work.

But the period of rest and refreshment seems now about to give place to a time of strenuousness. There are visible signs that the world-wide trade depression is passing away like a summer thundercloud. Prices are coming down to a point at which the foreign customer will be able and willing to buy our manufactures, and as soon as that stage is reached many new factories will be required, and many business houses to deal with their output. Obviously, therefore, to regain and retain a footing in the world's markets we shall all have to work strenuously—to produce everything as cheaply as possible, buildings by no means excepted. To do that we need not wait for the tremendous impetus to trade that the Empire Exhibition is sure to bring. Now is the time to begin the boom. The year 1922 is likely to be a year of unexampled activity and prosperity. Tremendous projects are foreshadowed—the Channel Tunnel, the electrification of railways, the construction of bridges, the running of railways to far ends of the kingdom. This all implies a concomitant building "boom" of record magnitude. There is every indication that this boom will begin with 1922, but will by no means end with it.

If, then, we cannot look backward with any high degree of satisfaction, we yet have much reason to look forward with hope and confidence. For hope at least there are excellent grounds. Much may be expected from the anticipated concordat at Washington, from the pacification of Ireland, from the ebbing of the tide of unemployment, from the lowering cost of life's necessities (including houses), from the dead-set against all profiteering, from the prospective reductions in rates and taxes, from the economic readjustment of the public services and of the costs of governance, central and local, from the more thrifty husbanding of both public and private resources, from the abandonment by the State of jobs that they were incompetent to handle (such as housing), from the decay of bureaucracy, from the greater freedom of industry from the shackles that have so galled and crippled it. If, indeed, there is any direction in which Government is justified in interference with industry, it is surely in that of restraining any tendency to inflate the prices of materials essential to the welfare of the community, as, for example, when the exorbitant prices for certain articles essential to housing have brought the industry to a standstill. In such cases, in the interests of the commonweal, the State, after due investigation (by Royal Commission if necessary), may reasonably and justly exercise its prerogative of intervention. There is no tyranny in terrorizing the terrorists.

Gradually, but very surely, there is emerging from smoky

nebulousness a clearer atmosphere in which the arts of peace can inhale the breath of life. A good time is coming for commerce. Implicitly and incidentally, a good time is coming for Architecture and the industries that wait upon it. Certainly we see here the natural recuperative power reasserting itself to heal the stricken world; but the process can be either helped or hindered artificially. Let us unite in assisting it with the self-denying and solicitous care proper to the tender treatment of convalescence. Unity of the Profession, unanimity among employers and employed, will combine for the speedy restoration to vigorous health and strength of our momentarily languishing art and industry.

As to Unification and Registration, it is mere courtesy to refrain from anticipation of the findings of the Joint Committee appointed to deal with these momentous issues. The results of their deliberations must soon be announced; and this event would by itself make the year 1922 memorable in the annals of the Profession. To which may all prosperity abound.

The Conversion of Victorian Houses

House-agents are bewailing the effects of restrictive covenants which prevent the conversion of early and mid-Victorian houses into convenient dwellings. These Victorian houses are described by one agent as having huge basements, "a very dark back room on the ground floor, a huge drawing-room on the first floor, which means that the best bedrooms are on the second floor, the spare rooms and nurseries on the third floor, and the servants' rooms in the fourth or fifth story, whilst the bath-room (there is seldom more than one) is tucked away somewhere on the back staircase." It is a dismal enough picture, and by no means overdrawn. Scores of such houses in the suburbs are being converted into flats, in spite of "restrictive covenants." Many others, so far from remaining empty, as the house-agent complains that many do, are scandalously overcrowded, three or four families having, for example, the sanitary and cooking accommodation originally not quite sufficient, according to modern ideas, for one family. Let the authorities look to it lest epidemics be bred.

The R.I.B.A. and Taller Buildings

It is not easy to force the hands of the Institute. Of this fact there has been no lack of evidence in the past, and the Council's present attitude on the question of taller buildings for London is additional confirmation of its customary firmness and fairness. It believes that any general increase in the height of buildings would be detrimental to the amenities of London; that the powers entrusted to the London County Council of permitting increased height where they see fit are exercised in a reasonable way; that the wide streets and open spaces of London, being of great value for the circulation of air, should not have that value impaired by the erection of tall buildings; that the proposal to make up for housing deficiency by the erection of tall buildings is reactionary, such buildings being inimical to family life; but that, finally, the rigid restriction of the height of the top floor to 60 ft. in buildings of large cubical contents is no longer necessary or desirable in view of modern methods of construction and of fire attack. This is just such a broad and statesmanlike recommendation as the Institute might have been expected to put forward, and it will help the London County Council to keep its head in spite of the vigorous and persistent assertion of narrow sectional interests. In reality, the demand for general relaxation of the by-law as to height is superfluous as well as dangerous—superfluous because the Council already have power to provide for special instances; dangerous, because it would weaken the hands of the Council by depriving them of control where it might be badly needed. Doubtless the London County Council will act on advice which is so manifestly wise and disinterested. It is worth while to note here a point to which Mr. Bernard Bosanquet draws attention in a letter to "The Times." That eminent social reformer the late Dr. Vivian Poore, it is recalled, objected to tall buildings on account of the increased cubical content which their increased height involves. This, he held, automatically intensified overcrowding, both on area (e.g. per acre) and under one roof, and also threw intensified work on the streets and the drainage system. Open spaces, he urged, were no compensation for confinement to the inside of a huge structure, where ventilation is mostly from one confined space to another.

Art in the Schools

Professor Rothenstein, Principal of the Royal College of Art, does well to call attention, as he did the other day in a lecture to members of the County of Middlesex Education Society, to the appalling waste of artistic talent, or at least of talent for drawing, that goes on perennially in our schools of all grades. Whether or not he—unintentionally if at all—exaggerates "the extraordinary imaginative power and æsthetic intuition with which nearly all young children are gifted," there can be no question that those gifts are shockingly neglected in the school curricula. He wisely refrained from mentioning any particular system by which art could or should be taught. He simply insisted on the earnest endeavour to encourage acute observation, to teach children to see. That is certainly a fundamental principle. For us the point is not simply that we should thus get better technical draughtsmen, but that the average power of perception would be appreciably raised, and would react on every form of art, including architecture.

Memorial Gates to Dr. W. G. Grace

Iron gates, to be placed at the members' entrance to Lord's Cricket Ground, have been decided upon as a memorial to the late Dr. W. G. Grace. Why this particular form should have been supposed to be the most suitable by which to honour the greatest cricketer of all time may become clearer when the design is published; but, in any case, it may be hoped that the amount of the tender—£2,268—to which the public are invited to contribute one-half, may be so hugely over-subscribed as to warrant, besides a handsome donation to the Cricketers' Fund, the erection of a statue also. A lifelike effigy of the incomparable "W. G.," bat in hand, in the very act of playing the game, should be an inspiring theme to a competent sculptor. But the personality of Dr. Grace was ever conducive to "good gates" at Lord's and elsewhere! There is no lack of precedents for the glorification of games. Did the ancient Greeks disdain to erect statues to their athletes? The Discoboli at the gateway to one of the Thames Embankment Gardens will not deign to answer so superfluous a question; but they might have been allowed to suggest a suitable motif for the Grace memorial. Public statues to men renowned for skill in manly games would fulfil a useful function as an incentive to the development of physical power and prowess, and incidentally to the love of fair play.

An Announcement

The proprietors of THE ARCHITECTS' JOURNAL much regret to announce that in consequence of the increasing pressure of his professional and scholastic duties, Professor A. E. Richardson, F.R.I.B.A., has found it necessary to retire from the Editorial chair of this JOURNAL, which he has occupied with distinction and success for the past three years. They would like to take this opportunity of placing on record their appreciation of the valuable services which he has rendered, and to acknowledge with gratitude the energy, insight, and ability which he has invariably exercised in the editorial conduct of the paper.

Readers will notice that a change has been made on the front cover of the JOURNAL, a medallion portrait of Inigo Jones now appearing in place of the Minerva head design. This portrait originally appeared on the cover of THE ARCHITECTURAL REVIEW, for which magazine it was specially drawn by the late Mr. John Belcher, from the medallion in the Victoria and Albert Museum.

CANNON STREET STATION
FROM THE RIVER.

From an Etching by Frank Brangwyn, R.A.

Mr. Brangwyn's Etching of Cannon Street

By CROSSLEY DAVIES

MR. FRANK BRANGWYN'S etching of Cannon Street, reproduced in this issue by courtesy of the artist, has many points of interest, both artistic and historic. To the architect it makes a special appeal. But its appeal is not confined by any means to lovers of architecture. As an etching it is vigorous, dramatic, full of life and purpose. Few artists could make of Cannon Street station a thing of beauty, could see in it all the dignity of simple mass, such a poem of progress as Mr. Brangwyn has made of it.

We doubt if any other artist could have caught, as he has done, the essential spirit of this great half-dome of glass and steel. To most people Cannon Street Station is one of London's ugliest monuments—black, gaunt, starkly practical. Most artists, had they chosen to make an etching of it, would have turned to the front, with its ornamental façade, its sweeping steps, its busy forecourt. Here they could have given us a vision of the life of a great city, with its ever-moving crowds, its bustle and its battle. They could have bitten with telling force into the copper the arresting contrast of the big building and the small men who pass beneath its shadows. Mr. Brangwyn rejects this obvious but tempting theme. He takes us to the riverside, and there he shows us the inner beauty of an outward-seeming ugliness. London, after all, was built up on the banks of the Thames.

And there, where the great river winds between wharf and factory, embankment and Parliament House, is its heart. With the sure instinct of the seer Mr. Brangwyn looks at London from the river. Against it Cannon Street takes on an imposing strength. It looks like the giant gateway of the modern city. It stands for civilization and commerce. And the river symbolizes all the past ages that alone have made possible Cannon Street and all that it represents. Hard by the station lies much buried history. It is suggested in the fine façade of the City of London Brewery to the east. Though this was only built in 1883, it has a strong suggestion of the Wren influence, and architecturally, for a riverside building in the business quarter, it is unusually attractive.

Within the precincts of the brewery are the sites of two old churches which were burnt down in the Great Fire. One of them was rebuilt at the time when Wren was at the height of his fame, and the influence of his genius determined the style of all the new church buildings in the city. The place is rich in tradition. On the site there was, back in the fourteenth century, the royal residence of Edward the Black Prince. It was known as Cold Harbour, a name which still survives in London. Cold Harbour was built by Sir John de Pulteney, who was Lord Mayor of London four times. A wealthy wool merchant, he had the privilege of lending money to the king.

His fortune must have been great, for despite these royal loans he was able to afford the most magnificent house in the City, so fine that after his death in 1349 it was used by the Black Prince. Sir John's name is to this day embedded in the City's annals, for from him is named Laurence Pountney or Pulteney. His memory is also kept fresh farther afield in Pulteney Street in the West End. The records of the brewery itself, the only brewery for many years in the City, go back to the days of Elizabeth. To this day one of the stores is the historic Watermen's Hall, where the "Good Queen Bess" is reputed to have held high revelry one famous night with her faithful watermen. There is little left to impress the casual visitor with the age of the building. Outside is a plain brick wall. Inside only the thick oak beams, upheld now by steel columns, give evidence of its age.

According to Stow the brewery was, most appropriately, "builded by one Pot," in Elizabethan days. One of its main branches of business was the sending of strong ale to Amsterdam. Parts of this building, which escaped the Great Fire, are still standing, and the Hour Glass public house, an inn of the sixteenth century, adjoins the present offices. Within the three acres of the premises are the sites of the churches of All-Hallows-the-Great and All-Hallows-

Photo: L.N.A.

MR. FRANK BRANGWYN R.A.

the-Less. One only was rebuilt after the fire, but the ancient churchyards of both still remain, surrounded by the brewery buildings. There is some church land adjoining, on which stands to-day the vestry of the parishes of All-Hallows-the-Great, All-Hallows-the-Less, and St. Michael Royal, College Hill, and part of the tower of All-Hallows-the-Great. And, within the brewery, is to be found the site of the old Steelyard.

Running below the older buildings are some historic vaults. At one time the Rector of All-Hallows-the-Great let them out to City wine merchants, and thus secured his clerical stipend.

Close to one of the main gateways in Upper Thames Street there is the old watch-tower built for the "Charleys," or night watchmen, about 1700. There are no fewer than three wells, one 483 ft. deep. Early in the seventeenth century the property came into the hands of Henry Calvert, who, in 1750, was succeeded by Sir W. Calvert. About this time there was an amalgamation with Calvert and Seward, of Whitecross Street, the business being carried on on the old site under the title of Calvert's Brewery. In 1860 the firm was turned into a limited company under its present title.

There are actually two breweries; the original one, famous for centuries for its porter and stout, and another built between 1835 and 1840 for brewing ales. There are many ancient vats yet in use, one being much larger than the famous Tun of Heidelberg. Another interesting relic is an original Watt engine, working to this day, which at first had to be hired out from the inventor at a rent of £63 a year.

These details have a peculiar interest just now, as the brewery company is moving, and the premises are for sale. It is more than likely that the old buildings will be pulled down soon unless some firm with a respect for tradition and the ability to adapt the existing premises to their service buy the property. The brewery business, it is stated, is to be centred at the Red Lion Brewery, Upper East Smithfield, which has also a history of many centuries. Founded in the fifteenth century, it supplied porter—"Black champagne" as Goldsmith called it in a couplet referring to both breweries—to the Court of Louis XV.

Chief Architectural Events of 1921

R.I.B.A.

THE Presidential Address to students delivered by Mr. John W. Simpson on January 31 was one of the finest of his many happy efforts in this kind, replete with sound practical advice, particularly with respect to competitions.

Mr. Gordon H. G. Holt, this year's winner of the Tite prize, is a frequent contributor to this JOURNAL.

Sir Edwin Landseer Lutyens, R.A., F.S.A., F.R.I.B.A., received the Royal Gold Medal.

Mr. H. P. Burke Downing read the customary review of the Competition Designs, in the course of which he said: "Recalling the exhibitions of twenty or twenty-five years ago, I observe very clearly the increasing influence of the architectural schools."

Entrance fees for the Institute Examinations were increased as follows: Preliminary, to four guineas; Intermediate, to five guineas; Final, to six guineas; Special Final, to ten guineas; and to the same sum for the Special Overseas Examination.

The Council sent out to allied societies a circular suggesting that, in accordance with the Housing Act, 1919, each allied society in Great Britain should appoint a special town-planning committee, with a view to the appointment of a competent architect in each case, and to keep in touch with the R.I.B.A.

It was resolved to restrict the number of hon. members to the filling of vacancies as they occurred.

A non-professional class, to be called "Subscribers," was created, and the period qualifying for Retired Fellowship was curtailed.

The election of Mr. Paul Waterhouse, M.A., to the distinguished position of President of the Institute recalled the fact that his father, Alfred Waterhouse, R.A., had preceded him in this office.

In May, Mr. Ian MacAlister, the secretary, published a letter to the effect that "the Council consider Form of Contract No. 3, issued by the Ministry of Health, leaves too much to the contractor, who is protected at every turn and has little responsibility," and the Council greatly preferred the lump-sum contract. The Surveyors' Institution, the National Federation of Building Trades Employers, and the Society of Architects were invited to confer with the Institute on the subject.

The Council informed the council of the Institute of Scottish Architects that they would not oppose their application for a Royal charter of incorporation.

At a February Council meeting a satisfactory agreement with the Ministry of Health as to a scale of fees for housing work was announced; a committee was appointed to arrange for the holding of annual conferences in important provincial centres; a proposal by the Competitions Committee for bringing the allied societies into closer touch with the Institute in the control of competitions was accepted; the Council adopted a programme for a series of public lectures on architecture by distinguished authorities; the Council requested the Practice Committee to confer with the representatives of the Surveyors' Institution on proposals submitted by the Assistants' Welfare Committee; and the Literature Committee was asked to consider the advisability of giving further financial assistance to the British School at Athens.

In May it was stated that Sir Charles Ruthen, Director of Housing, had consented to receive a deputation to discuss all outstanding questions respecting the scale of fees for housing schemes.

In March, the President reported that members of the Council, and several leading master builders, had met in consultation on the question of conditions of contract, and it was hoped that formal negotiations would be resumed on a satisfactory basis.

Mr. George Hubbard was appointed to serve as a representative of the R.I.B.A. on the Building Trades Parliament, in place of Mr. Paul Waterhouse, resigned.

In March, the Prince of Wales graciously accepted his nomination as an Hon. Fellow of the Institute.

At a meeting held on Thursday, May 12, it was unanimously agreed to accept the principle of amalgamation, whereby the whole profession of architecture shall incorporate all qualified architects in one organization, and a sub-committee was appointed to submit details of a scheme, which will be considered in consultation with the Society of Architects. Particulars of this important step towards Unification were printed in our issue of May 25, at page 661.

A brief report of the subsequent conference at which a joint committee to consider the matter was appointed, appears on page 664 of our issue for May 25, 1921.

The five years' course of the Glasgow School of Architecture was recognized as exempting from the Final Examination under the usual conditions.

The newly formed Berks, Bucks, and Oxon Architectural Association was admitted to alliance under By-law 78.

The Council approved a scheme for the annual award of two Archibald Dawnay scholarships.

Mr. J. A. Gotch was re-elected to represent the Institute on the Court of Governors of the University of Sheffield.

Mr. Ralph Knott, architect of the London County Hall, was unanimously elected a Fellow.

The first provincial conference of a series projected by the Council took place at Liverpool on June 24 and 25.

The question of altering the scale of professional charges

for housing work was considered at a Special General Meeting held in July, when the Council was called upon to repudiate a statement that the R.I.B.A. had agreed to the scale announced by the Ministry of Health.

At the Council meeting held on July 18, the purchase of No. 10 Conduit Street for much needed extensions was reported by the President, and a vote of thanks was accorded to Mr. Sydney Perks for his services in the matter.

Mr. Jay Hambidge's paper on "Dynamic Symmetry," read on March 1, was one of the most interesting of the session.

Mr. G. Northover retired from the administrative staff, on which he had been a valued official since 1893.

Mr. H. G. Tayler, the assistant secretary, retired after more than forty years' service.

Mr. H. G. Evans, B.A., was appointed assistant secretary, and Mr. J. Haynes, B.A., secretary of the Board of Architectural Education.

The Council have had under consideration the proposal to award each year a medal for the best building.

Mr. Bertram Goodhue and Mr. Donn Barber were accorded a hearty reception at a meeting which they addressed.

The exhibition of American Architecture opened by Lady Astor, M.P., on November 20, attracted much attention in the Press, and incidentally gave an impetus to the movement in favour of taller buildings for London—a movement with which, it appears, the Institute has but little sympathy.

The Competitions Committee were authorized to confer with representatives of the Society of Architects in regard to the more effective control of competitions.

The new President, Mr. Paul Waterhouse, delivered his inaugural address on November 8. It contained no reference to the questions of Unity and Registration, as the deliberations of the joint committee on these subjects were not then completed.

Other Institutions and Associations

An exhibition at the Architectural Association rooms of drawings and sketches by the late E. A. Rickards revealed that gifted draughtsman in many media, manners, and moods.

A memorial library to fallen members of the A.A. was inaugurated by the Right Hon. H. H. Asquith, M.P., on November 15.

A notable feature of the year's activities of the Society of Architects have been its several competitions for students, including the Victory Scholarship competition, which was instituted in 1919 to commemorate the services of members in the war.

At the first Atelier built and equipped by the Society of Architects, zealous promoters of the movement assembled, on March 1, to make arrangements for "carrying on."

At the annual meeting of the Northern Architectural Association, Mr. T. R. Milburn was elected President, in succession to Mr. C. S. Errington.

In April, South Wales Institute of Architects elected as its new President Mr. Henry C. Portsmouth, F.S.Arc.

Mr. Charles Steward Smith, F.R.I.B.A., J.P., was elected first President of the newly formed Reading Society of Architects.

At the seventy-fourth annual meeting of the Liverpool Architectural Society in June, Major Gilbert Fraser was elected President, with Professor Patrick Abercrombie and Mr. W. Glen Dobie as vice-presidents.

At a meeting, in February, of the Council of the Institute of Scottish Architects, a draft of the Royal Charter was passed to be forwarded to the Privy Council.

Aberdeen Society of Architects elected Mr. George Bennett Mitchell as President, and Mr. George Watt, the retiring President, was elected to represent the Society on the Council of the Institute.

At the opening of the twenty-fifth annual session of the Architectural Association of Ireland, Mr. J. J. Robinson was elected President.

The Ulster Society of Architects elected Mr. R. M. Young as President.

Manchester District Institute of Builders have given £3,332 to Manchester University for the endowment of travelling studentships in the University's School of Architecture. Following this generous example, the Council of the Manchester Society of Architects decided to open a fund in aid of the school.

An architectural atelier has been arranged for the students of the new School of Architecture at Cardiff Technical College.

Ulster Society of Architects vainly protested against the method of selecting architects for the proposed Parliament buildings for Northern Ireland. Mr. Arnold Thornely and Mr. Ralph Knott may, nevertheless, be congratulated on their good fortune on such a rare opportunity for monumental architecture having fallen to their lot.

At a meeting, in February, of the Architects' and Surveyors' Assistants' Professional Union, minimum standard salaries were proposed (*see* page 198, issue of February 16).

In April, Sir John J. Burnet, F.R.I.B.A., was elected A.R.A.

Captain M. G. Kiddy was appointed secretary of the Concrete Institute.

The Industrial Side

At the annual general meeting of the National Federation of Building Trades Employers, which was held on January 26, at the Connaught Rooms, Great Queen Street, London, Mr. A. J. Forsdike was elected President in succession to Mr. Stephen Easten. The eighty-seventh half-yearly meeting was held July 26 to 28, at Sheffield.

Beyond holding several stormy meetings the Builders' Parliament has given very little evidence of vigour, but the addition of a few architect members has had a slightly ameliorative effect.

In February it was announced that the Council of the Scottish National Building Trades Employers' Federation had withdrawn from the Industrial Council (Builders' Parliament), the conditions of the building trade in Scotland being different from those in England; but a deputation was appointed to ask the Scottish employers to reconsider the step.

At a mass meeting, in March, of the London District Council of the National Federation of Building Trades Operatives, their secretaries recommended acceptance of the reduction of wages proposed by the National Joint Wages and Conditions Council.

Mr. A. G. White, who has been for so many years the able and highly esteemed general secretary of the National Federation of Building Trades Employers, found that the duties of that onerous post prevented his continuance as joint-secretary of the so-called Builders' Parliament, which post he accordingly resigned, to the general regret.

Councillor R. Coppock, of Manchester, was appointed general secretary of the National Federation of Building Trades Operatives, in succession to the late Mr. Bradshaw.

National Housing

The abandonment of the National Housing Scheme was foreshadowed in the caustic correspondence which took place in "The Times" during January. When the shortage of houses became acute, "there were," wrote Dr. Roberts, of Worcester College, Oxford, "two possible courses of action. One was to allow economic forces free play to develop their recuperating power; the other was to manipulate and neutralize those forces by State action." Unfortunately, the wrong course was taken.

On January 26, it was remarked in this JOURNAL that it "was cruel to saddle Dr. Addison with Lord Downham's sinister legacy of an insoluble housing problem. Like Sindbad, he assumed his burden cheerfully, but soon found he could neither bear it nor shake it off. It was imposed upon him through some muddled misunderstanding such as politicians alone can ever achieve."

In January, the Ministry of Health issued a statement detailing its attitude towards the Guild System of building, to which it accorded certain advantages in spite of the protests of Mr. Stephen Easten, who consequently resigned his honorary post of Director of Housing.

Early in the year it was announced that the National Federation had given definitely its adhesion to the Government's proposal to dilute building-trade labour with 50,000 men, but the operatives remained obdurate, although passively opposed to it, and the result has fallen far short of its promoters' expectations.

At the London County Council meeting of March 15 it was stated that the Council's grandiose scheme for Dagenham (or Becontree) had been held up by the Government.

In April, Dr. Addison resigned his post as Minister of Health, and his supersession by Sir Alfred Mond marked a complete reversal of the State housing policy.

It was inevitable that the abandonment of the Ministry's housing activities should entail serious hardships on the staff that Dr. Addison had got together, and there has been much suffering among the disbanded architects and surveyors. An analysis of this massacre of the innocents was given in our issue of August 17, at page 198.

In April, Sir Charles T. Ruthen was appointed Director of Housing, in succession to Mr. Stephen Easten.

Brief Chronicle of General Events

An "Art in Common Life" movement was inaugurated by "The Times," where it was under discussion for some weeks. Among the many architects contributing to it was Sir Aston Webb, R.A. Other questions that have received considerable attention in our pages and elsewhere are those referring, respectively, to various aspects of the endeavour to secure the confidence of the building public, and to the desirability of modifying the London restrictions on tall buildings.

The fine old Tudor mansion known as Chequers, Bucks, was presented to the nation by Lord Lee of Fareham as a country residence for Prime Ministers, and was taken over by Mr. Lloyd George on January 8.

In March, the Prince of Wales was installed as President of the Royal Commission for the Exhibition of 1851, which is the financial mainstay of the British School at Rome.

In March, a proposal was made to tunnel the Thames between Gravesend and Tilbury, and thus to facilitate a direct route between Manchester and Margate.

The Building Exhibition at Olympia, which was opened on April 12 by Mr. John W. Simpson, P.R.I.B.A., showed no falling-off in any respect as compared with its precursors.

An exhibition opened early in the year at the Architectural Reading Room, 27 Tothill Street, Westminster, of etchings and water-colours by Mr. William Walcot, attracted many distinguished visitors, including her Majesty the Queen and Princess Mary.

On May 25, Gandon's Custom House at Dublin was wilfully destroyed by fire.

At a meeting of the London County Council in February it was announced that the estimated total expenditure for the complete County Hall scheme was £4,344,000, exclusive of furniture. The original estimate was about a million and three-quarters.

A Bill was deposited by the City of London Corporation seeking power to borrow further sums for the reconstruction of Southwark Bridge and the construction of St. Paul's Bridge. Leave was asked to borrow £3,050,000, instead of £2,250,000 as authorized in 1914.

On March 10 the Chancellor of the Exchequer, replying to a question in the House of Commons, said that a deposit of £42,300 had been paid towards the cost of the Bloomsbury site for London University, and that it was not possible to postpone or abandon the purchase.

In the House of Lords, on April 26, Lord Burnham asked a question "with the wish and purpose of bringing to as speedy an end as possible the whole series of arbitrary and unequal restrictions upon building as applied by the local authorities throughout the country, because he believed they had been in restraint of trade." He carried his point.

In March the report of the Royal Academy conferences on the threat to the City churches was issued, and the gist of it was in this passage: "We feel strongly that an evil precedent will be created if the Church of England is a party to the destruction of monuments of the past which are irreplaceable." The Bishop of London replied: "I can assure you that no wholesale demolition of nineteen City churches is contemplated."

Mr. Ernest Newton, R.A., who has taken up with vigour the advocacy of smoke-abatement, had an eloquent letter in "The Times" of April 18, in which he deprecated the expenditure of large sums on smothering ourselves. He has also contributed powerful articles on this subject to "The Glasgow Herald," and it is evident that it is to him that the late Sir W. B. Richmond has handed on the (smokeless) torch. By a happy if confusing coincidence, Lord Newton was appointed chairman of the Royal Commission entrusted with the investigation of the subject. Their report appeared in December.

In May, the new Southwark Bridge, of which Messrs. Mott, Hay, and Anderson were the engineers, with Sir Ernest George, R.A., as architect, was formally opened by the King. The collaboration between an architect and the engineers is noteworthy.

Obituary

The year's obituary includes the following names:—Mr. Henry T. Hare, Past-President of the R.I.B.A., had held that post during 1917 to 1919, a period of exceptional difficulty.—Mr. G. F. Bowman, of Leeds, was a pupil and partner of the late Mr. T. Ambler, and was for five years President of the Leeds and West Yorkshire Architectural Society.—Sir William Blake Richmond, R.A., who died in February at the age of seventy-eight, was best seen as a portrait painter, but will be most remembered for his ill-advised mosaics at St. Paul's and for his powerful invective against the smoke nuisance.—Mr. Edmund Sedding, F.R.I.B.A., of Plymouth, had done much fine church work.—M. le Comte Robert de Lasteyrie, Membre de l'Institut, was a corresponding member of the R.I.B.A., and had published an important work on religious architecture in France of the Roman period.—Mr. Arthur Hill, F.R.I.B.A., M.A., B.E., F.R.I.A.I., Member of the Royal Irish Academy, had done much important work in the south of Ireland. For many years he was Lecturer in Architecture at Queen's College, Cork.—Mr. J. M. Dick Peddie, of Edinburgh, had designed the Caledonian Station Hotel and other buildings there, and was much engaged in church architecture.—Sir H. H. Bartlett, Bart., of the firm of Perry & Co., of Bow, contractors, was the munificent founder of the School of Architecture at University College, London, that commemorates his name.—Mr. William Strang, R.A., who died on April 12, was one of the foremost etchers of the day, but latterly had preferred the brush to the needle.—Mr. H. A. Purchase, of Harborne, was chief architectural assistant in the City Surveyor's Department of Birmingham Corporation.—Mr. G. S. Aitken was founder and first President of the Edinburgh Architectural Association.—Mr. F. G. Briggs, F.R.I.B.A., was a distinguished member of the architectural partnership of Briggs and Thornely, of Liverpool.—Mr. Peter Graham, R.A., had been for some sixty years or more one of our foremost landscape painters.—Mr. R. St. A. Roumieu, A.R.I.B.A., was the great-grandson of Abraham Roumieu, who was in practice as an architect in London in 1769.—Mr. W. R. Colton, R.A., was most popularly known for his Royal Artillery memorial in St. James's Park.—Mr. William J. Moore, of Belfast, had specialized in church architecture.—Mr. H. W. Richards was principal of the London County Council School of Building, Brixton.—M. Gaston Redon had won the Premier Grand Prix de Rome, and his atelier was one of the most popular among Beaux-Arts students.

The Design of the Shop Front from Ancient to Modern Times

By JAMES BURFORD, A.R.I.B.A.

TO attempt a description of ancient shop fronts reminds us of the student who dismissed the subject of his essay on "The Snakes of Ireland" with the single sentence: "There are no snakes in Ireland." Generally speaking, there are no ancient shop fronts. Nations whose story fills the first pages of history, races whose beginnings are lost in antiquity, onwards to the civilizations who have touched the fringe of modern thought—all, without exception, traded in the open market place, nor sought more convenience than a covered stall would give. Egyptians, Israelites, Hittites, Assyrians—all the primitive peoples of the earth, each maintained through the long series of the centuries the simple methods of buying and selling which had been natural to the earliest traders of their race.

The democratic aristocracies of Greece, while concerning themselves with the development of their art, or the growth of their national games, were yet content that their commerce should have no better housing than the temporary booth in the agora, or market place of the city, could afford. Even the Carthaginians, though the great traders of the ancient world, made but little progress in their methods of showing and cheapening their wares.

In the Græco-Roman towns of Central Italy, in such remains as those at Pompeii, we have in the little shops, each protected from the street by its marble-faced bench, the earliest proved instance of their use. Their reconstruction is an easy task. A brightly painted exterior attracts the likely customer, swags of fresh leaves adorn the lintel, the implements of the trade are displayed on a stepped stone shelf, while, perhaps, hanging from the balcony above, the works of some luckless picture-painter implore a purchaser.

The Dark Ages, of which Charles Lamb said he could "never hear mention of them without an accompanying feeling that our ancestors wandered to and fro groping," saw no development of this legacy of the Roman Empire, but witnessed a reversion to the simpler methods of an earlier time.

The early stories, plays, and proverbs of the Mediæval Period make frequent reference to the open market, the stall, and the saint's day fair. Craftsmen displayed their wares in the forepart of their workshops; and the general tradesmen, recognizing the advantage of a permanent premise, profited by their example and set up their trade in the ground floors of their homes. The typical mediæval shop was no more than an opening in the wall, protected by two shutters so hinged at top and bottom that the lower, opened downwards, would form the stall-board, while the other, lifted upwards, became for the time a protecting roof above. A side door gave access by a steep stair to the solar above. Of such a shop there is at Shrewsbury a fairly preserved example, and the remains of one other have been revealed by recent repairs to an old house at Lavenham. The stall-board was at first held up by light wooden supports, but in later times their place was taken by blocks or "bulks," which eventually impended so far into the street and became so serious an inconvenience that two Parliamentary Acts of the later half of the seventeenth century limited their projection first to eleven inches and finally to ten inches in the main streets and five in the bye-lanes. The last of these old "bulk" shops is said to have been in Gilberts Passage, near Clare Market, London; but market, passage, and shop are now no more.

From the end of the seventeenth century the development of the English shop front followed the general trend of the architectural progress of the era. The "bulk" shop, despite the growing chagrin of those who made of the hard "bulk" their nightly couch, gradually gave place to the shop front elegantly designed, with sashed windows of sparkling glass, glazed or panelled doors, and a dainty crowning cornice, carved and curved.

Many an English city and country town is graced and dignified by these old-fashioned, bow-windowed, square-paned shop fronts, and London by not a few.* "In such caskets were enshrined the gay wares of Chelsea china, the folios and bibelots in choice bindings of rough calf or old claret morocco . . . in the grocer's window were carinated bowls and bulging canisters of fragrant Bohea, quaintly enlivened with almond-eyed celestials. . . . At the 'Blackamoor's Head' were puncheons of rum and hogsheads of 'melasses'—shipped, by the Grace of God in good Order and well Conditioned, in and upon the good ship *Olive Branch*." †

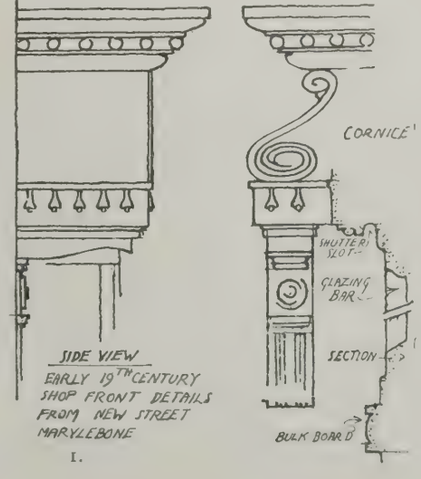
London is fortunate in retaining many shop fronts built between 1700 and 1840. The majority, however, belong to the latter part of the period. The tobacconist's shop in the Haymarket, of the first half of George II's reign (page 21), is too well known to need description. The cornice mouldings are probably later than the windows, and the brass stall-boards are modern. The front of the grocery stores in Artillery Lane, Spitalfields (Fig. 4), belongs to the same period. Here everything is as it was on the day when the forgotten craftsman who made it ended his task conscious of work well done. Nothing has been altered and nothing lost, the only addition is the iron railing above the cornice. Of a later date is the stationer's shop in Dean Street (Fig. 6). Here it can be seen, by comparison with the last example, how much the design suffers by the loss of the patterned glazing bars of the door. The lettering in the little baroque panels is original.

The Soho district can show many shop fronts of the last years of the eighteenth and the first of the nineteenth century; the streets between Holborn and the Euston Road, and northwards into Somers Town, present good examples of the same period, though generally of no outstanding merit; the delightful little row of shops behind St. Pancras Church is an exception too famous to need much evidence, while Lamb's Conduit Street prides itself in a collection well worthy of attention. Certain districts are characterized by some peculiarity of detail, the influence of a local craftsman's work. Thus at Paddington and Hackney, in the strong projection of the vertical bars and the thinness of the horizontal members we have a method of glazing shop windows distinctive of the localities (Fig. 2).

The old shop fronts of Marylebone are generally contemporary with the Greek revival, which lends a fresh interest of detail to compensate a loss of boldness in their contours. The corresponding period of French architecture, led by the genius of Percier and Fontaine, gave to shop fronts a character and expression of purpose which has done much to speed the progress of their subsequent development. This expression of purpose is well illustrated by the perfumer's shop in the Rue de Richelieu, Paris (page 13). There is about it an indefinable suggestion of the object of its existence, a redolency of perfume which proclaims its fitness.

The epoch of the Regency in England saw the first use—but a discreet use—of large sheets of plate glass for the glazing of shop windows. Though much of

* The simplest indication of the age of these old shop fronts is the size and moulding of the glazing bar; the wider the bar, the less its projection from the glass, the earlier the date of its origin. The panes progress from a broad to a narrow proportion, from a small to a large area, as the changing fashions of the times required. To have made a study of one of these old windows is to understand the principles to which they all conformed. The stall-board, decreasing in its height from the ground as the years advanced, is given a sufficient projection to take the lower edges of the loose shutters; the upper ends are held by a groove in the soffit of the name-board. A distinctive feature is the flat moulding which completely surrounds the window and is effectual in preventing damage to the glazing bars by the fixing of the shutters. These characteristics are clearly shown in the details of the shop in New Street, Marylebone (Fig. 1). The windowed door is usually given a lighter form of glazing bar, arranged in some simple geometrical pattern.



1.

† Ingleson C. Goodison, Arch. Review, Nov. 1920.

2.—A MUSIC SHOP IN THE HACKNEY ROAD.

Nash's work in Regent Street, London, has given place to buildings more suitable to the businesses they house, a number of the original shop fronts yet remain, of which Messrs. Capper and Waters's is an interesting if curious example.

The riot of vulgarity which characterized the second half of the nineteenth century found ample expression in the extensive plate-glass windows which displayed the products of a mistaken industrialism. We are but too familiar with the slender shaft, no thicker than a walking stick, and perhaps fourteen feet in height, capped by a parody of "Classic" or "Gothic" detail, and which seems to endure the dual duty of upholding an acreage of rolled sheet glass and of supporting the ponderous building above it. Lettering, advertisements, fittings, all the appointments of the shop followed, where they did not lead, the general decadence of the Age.

It was but in the normal sequence of events that a reaction should occur. So glaring did the faults of the Victorian shop front appear when compared with the elegant examples of the previous century that it was perhaps inevitable that a wholesale condemnation of the plate-glass window should be made. Before concurring in so drastic a sentence we should examine the requirements of modern trade.

A business which depends for its success on its sound reputation or the necessity of its customers may well find the small-paned shop front an ample indication of its existence. But it must be recognized that to the generality of tradesmen the sole object of the shop window is that of advertisement; it provides for this purpose an opportunity that cannot be overlooked. Large wares cannot be shown to advantage if the sight of them is impeded by glazing bars or an intervening pier: smaller goods may be better seen in a proportionately smaller window; but in all cases an uninterrupted view of the display is essential to the full development of its advertising capacity.

The plate-glass front is clearly the natural outcome of modern methods of trade. The need for advertisement has led to the multiplication of the windows, and it is thus that they encroach on the bearings of the superstructure, in many instances leaving no visible support. Here, then, the architect is confronted with the problem of how to stand his building, as it were, on sheets of plate glass without producing a sensation of impending disaster.

Where absolutely no solid support can be obtained he must own himself defeated; the utmost he can achieve is a light treatment of the upper stories. But his case is altered if a narrow strip of walling can be preserved on each side of a small shop front, or if a series of slight piers may be retained between the windows of a larger; however inadequate they may seem for bearing up the weight above them, they will yet enable him to employ a series of devices to obviate the appearance of suggested insecurity.

We are too tied by custom and precedent to the established laws of proportion suddenly to adapt ourselves to the fresh systems which new materials suggest. While our conception of architectural design will be less embarrassed by long-accepted theories, and our freedom from classical formulæ increased as new methods and materials are better understood, it is yet by these existing rules that architectural composition is to-day mainly governed and will be influenced in years to come. A building so undermined by a succession of plate-glass windows that but a few slender piers are seen between them, may satisfy the engineer of its stability, but it cannot make that impression of rectitude and probability that the architect requires. To avoid misconception it must be insisted at once that to treat this matter frankly is but the courting of disaster. It is here useless to trust that the virtue of a truthful statement will necessarily bring its due architectural reward. When violence has been offered to the laws of æsthetic composition the retreat must be made with subtlety and tact.

The use of a lintel of seemingly sufficient depth to span the shop window and bear up the weight above it argues a width of supporting pier that by encroaching on the window space defeats the object for which the lintel was intended.

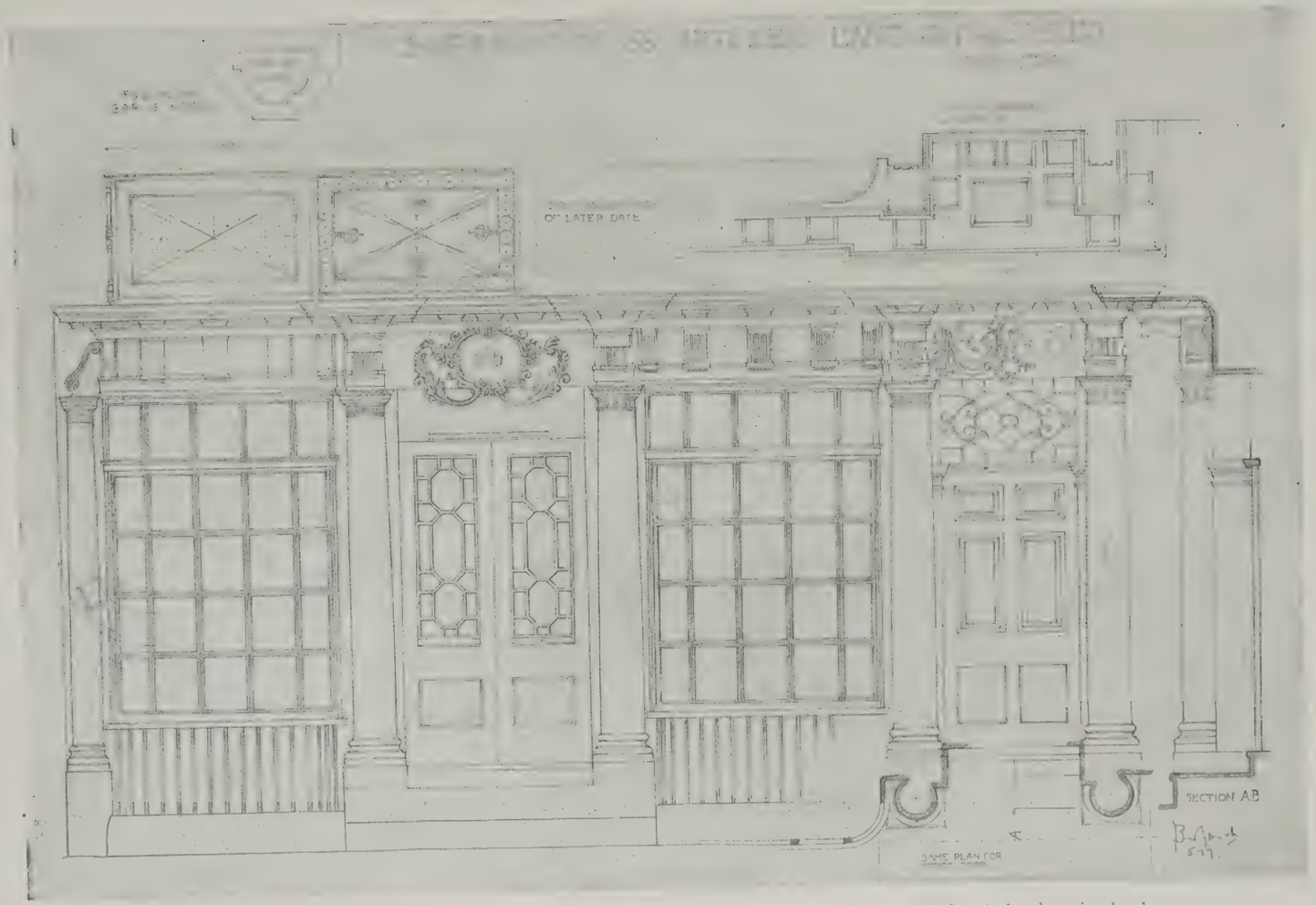
In cases where large glass shop fronts are placed under a building in which the area of the windows above the shop fronts is less than the area of the wall surface, the consequent appearance of weakness in the lower part of the façade may be corrected by four methods.

1. The simplest device is that of placing a heavy projecting balcony over the first-floor windows. The deep shadow cast by this projection makes a strong attraction to the eye. The attention is either held by the shop window or by the comparatively solid wall surface on which the shadow falls; the weak juncture between the shop front and the wall above it is passed unnoticed. This method is well shown by the building in the Boulevard de Sebastopol, M. Lecomte architect (Fig. 3).

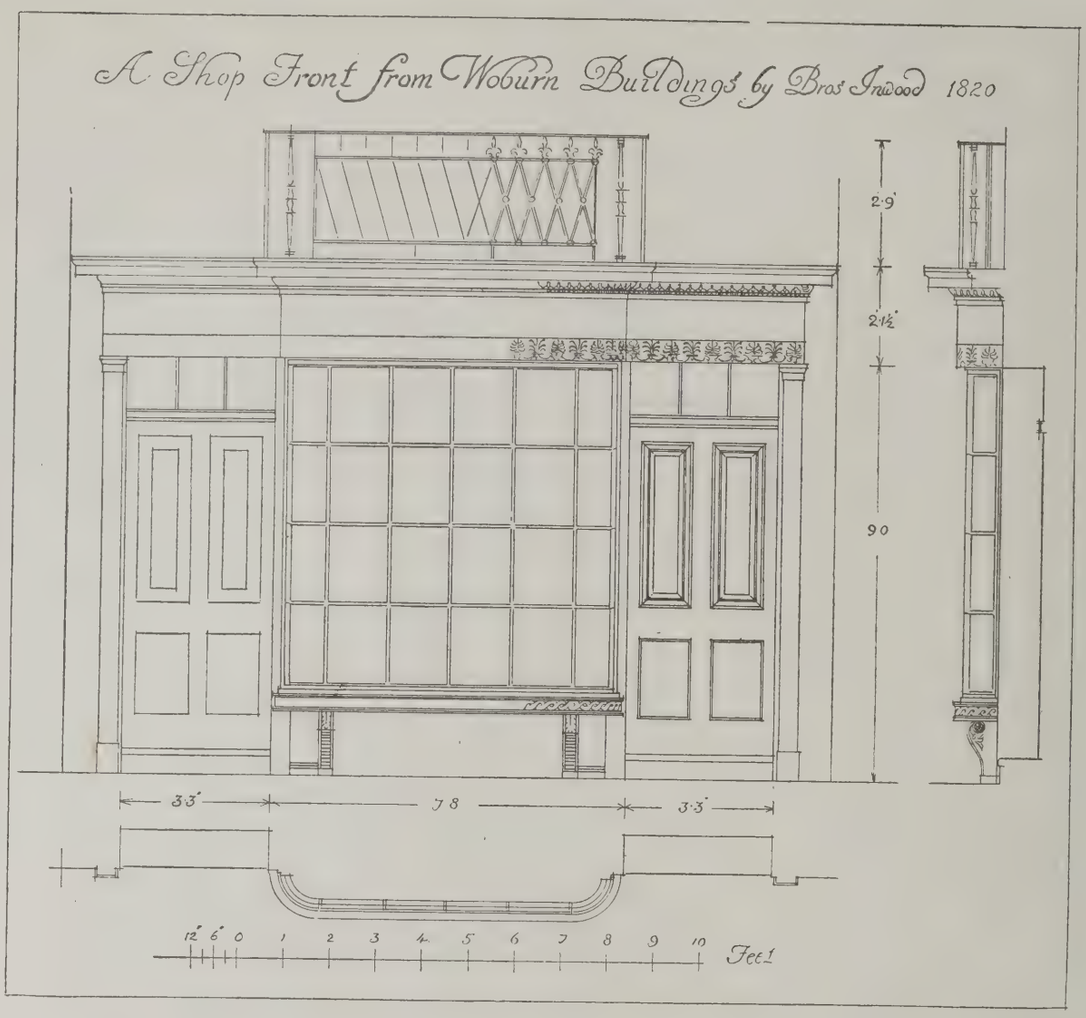
2. For shop fronts occupying the two lowest stories of a building where a balcony placed over the second story windows would be too high to make its effect, the junction between the solid wall and the void below may be effectually screened by a metal canopy, which can be a

3.—FACADE IN BOULEVARD DE SEBASTOPOL. LECOMTE, ARCHITECT.

4.—Grocery Stores in Artillery Lane, Spitalfields



This magnificent eighteenth-century shop front is complete in every detail. The patterning of the glazing bars in the door is typical of the period.


A Shop Front from Woburn Buildings by Bros Inwood 1820
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2·1½
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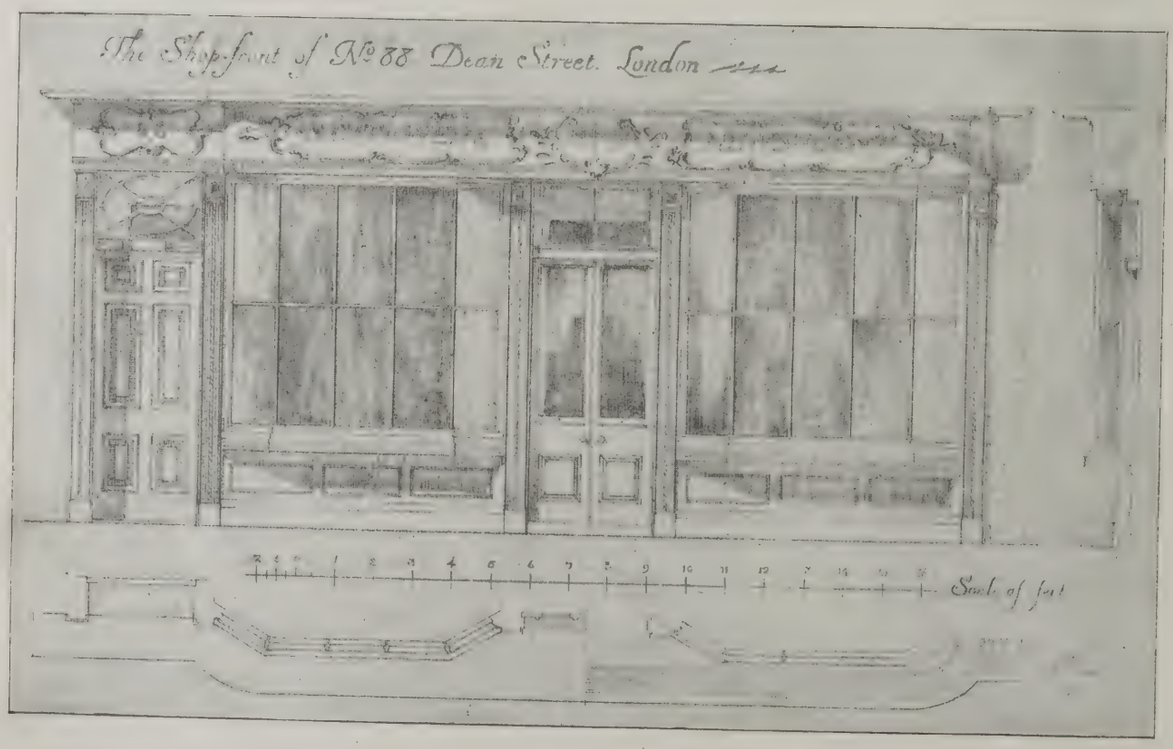
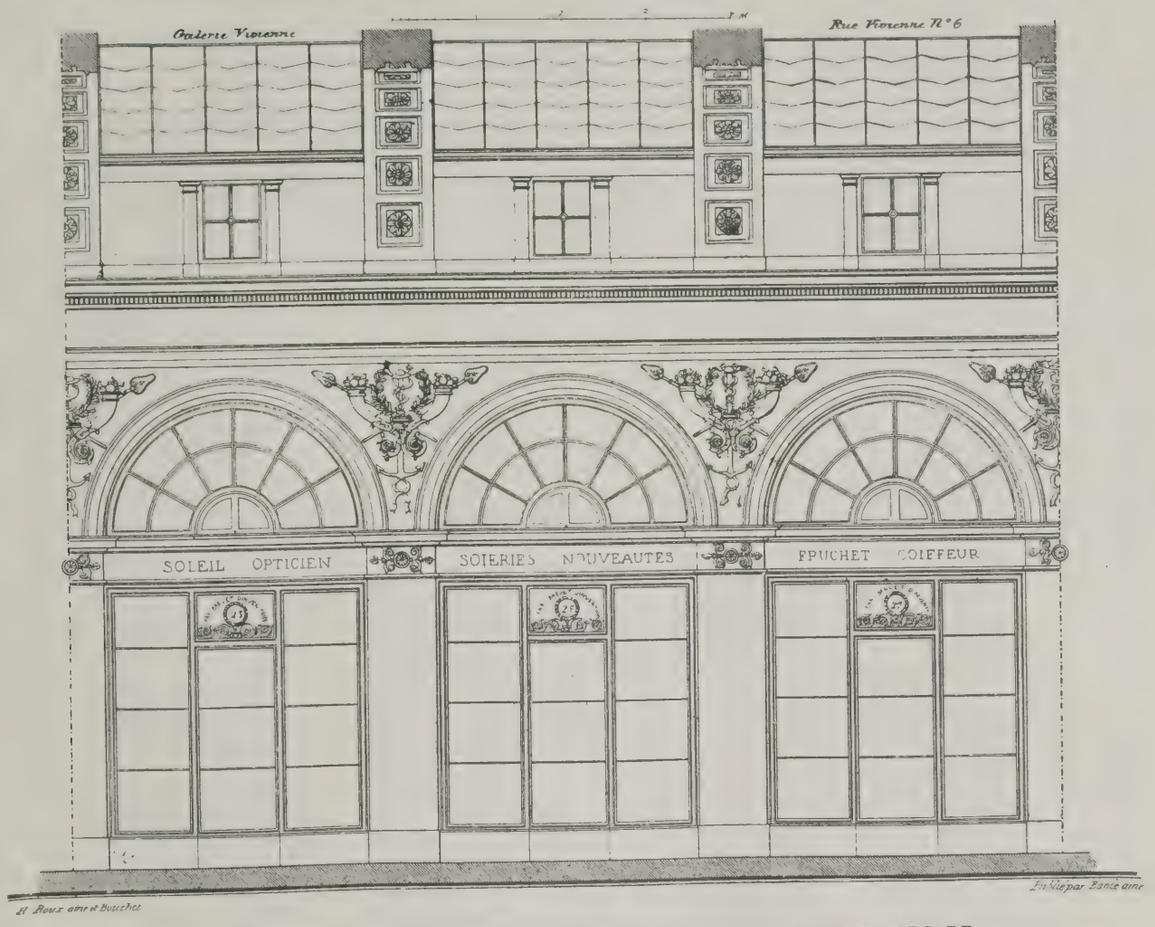
7 8
3·3
12 6 0 1 2 3 4 5 6 7 8 9 10 Feet

5.

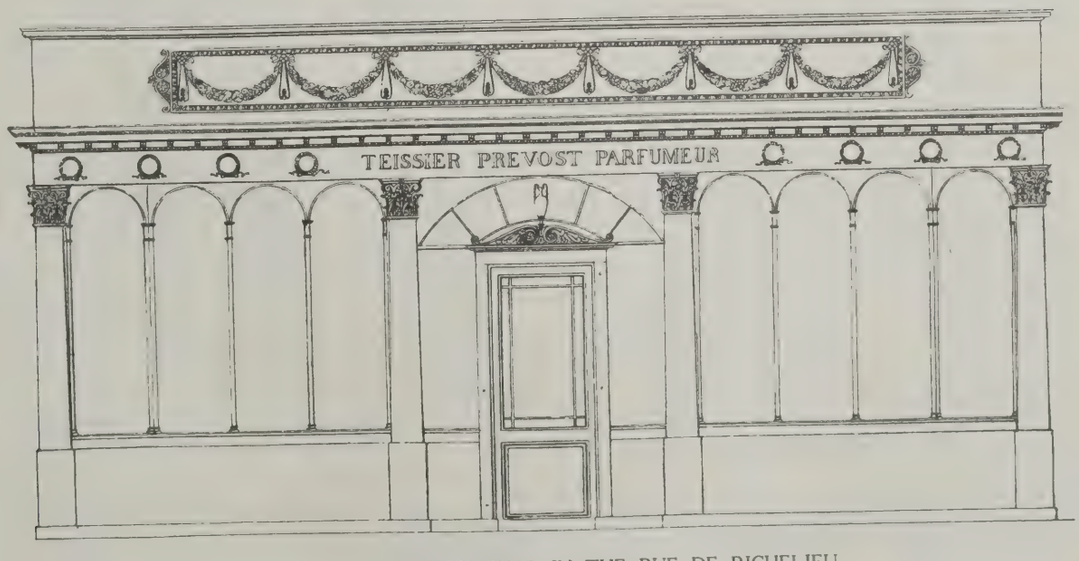

The Shop-front of № 88 Dean Street. London
Scale of feet

6.

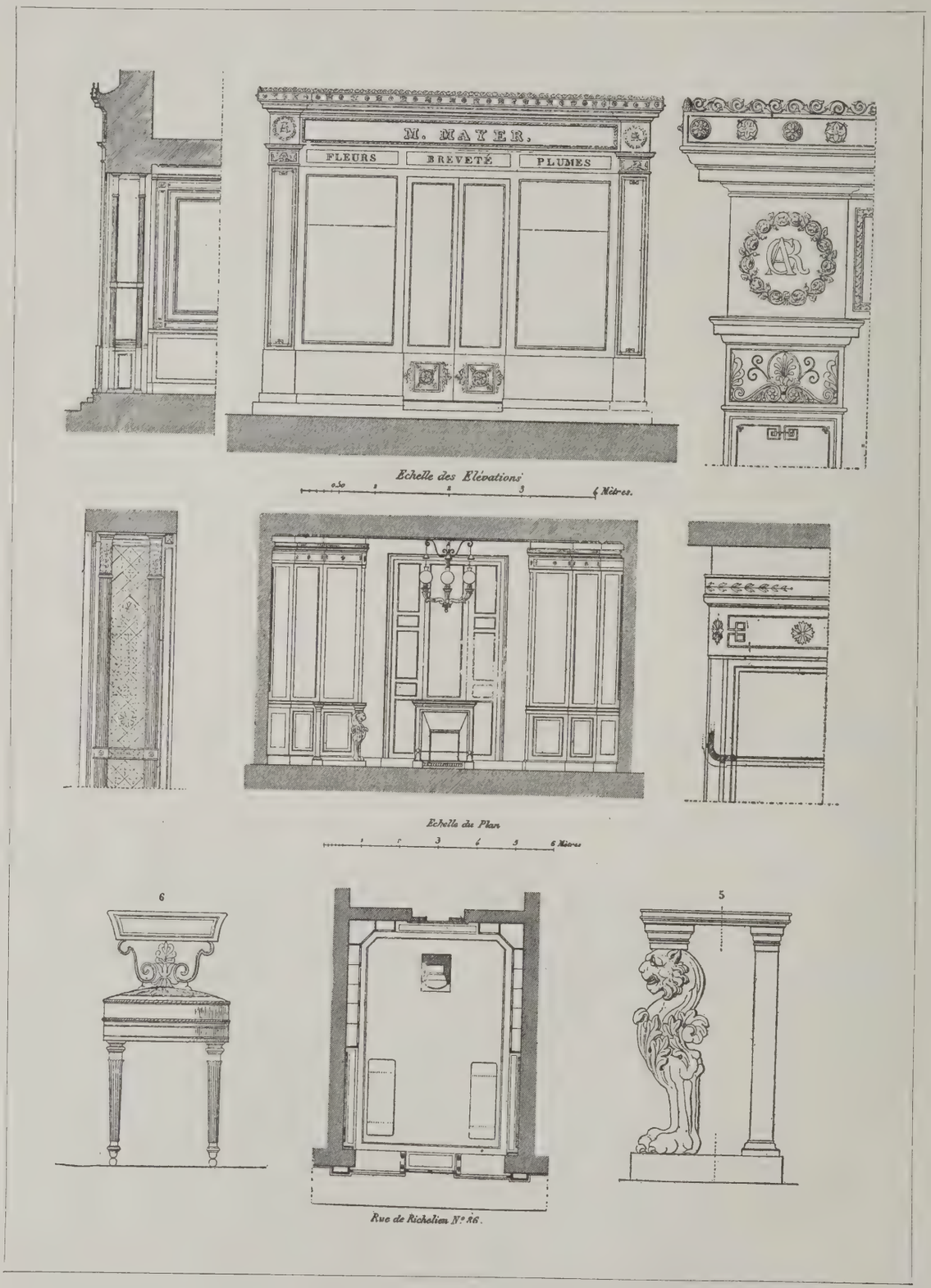
Two Paris Examples of the 1810 Period



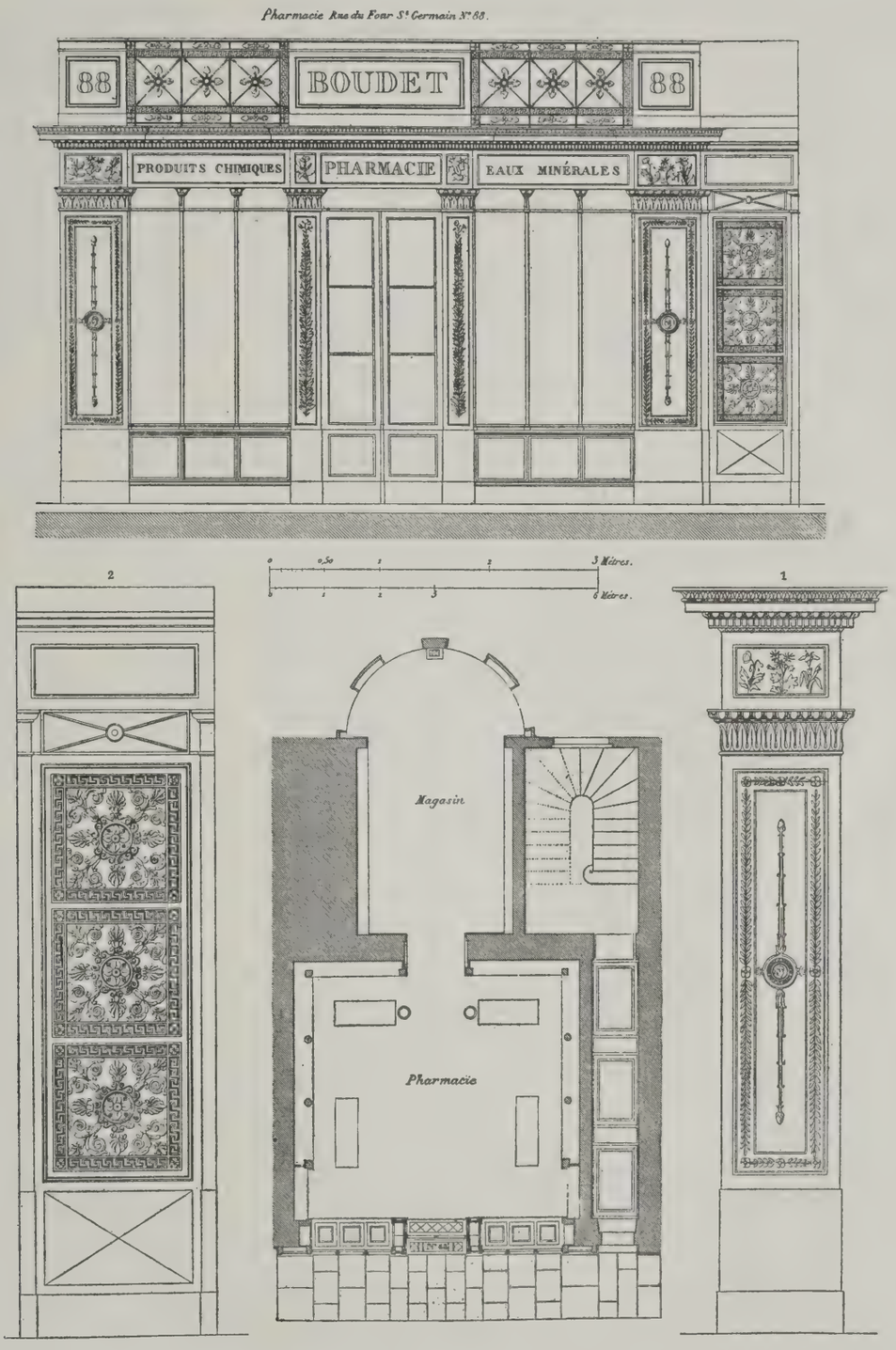
7.—AN INTERESTING TREATMENT OF SHOP FRONTS IN A COVERED ARCADE.



8.—THE PERFUMER'S SHOP IN THE RUE DE RICHELIEU.



9.—SHOP IN THE RUE DE RICHELIEU, PARIS

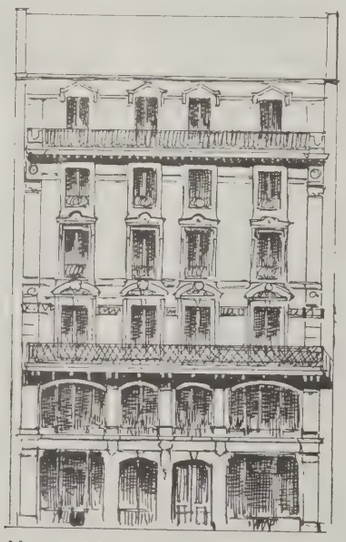


10.—A PARISIAN "PHARMACIE" (1810 PERIOD).

slight projection if given sufficient depth. A cleverly managed example is seen in No. 4 Grande Rue à Batignolles, by M. Bourlier (Fig. 11).

11.—IN GRANDE RUE A BATIGNOLLES. BOURLIER, ARCHITECT.

3. A third method, again for the two-storied front, combines the use of a balcony over the first-floor windows, with a series of flat arches which play an important part in the apparent transmission of the weight of the walls to the piers between the windows of the shop. Here the projection of the balcony can be slight; a strong cornice would be sufficient to mask the junction between the two characters of the façade. This device has been successfully used by the architects of No. 63 Boulevard de Sebastopol, MM. Garnier et Coulon (Fig. 12).

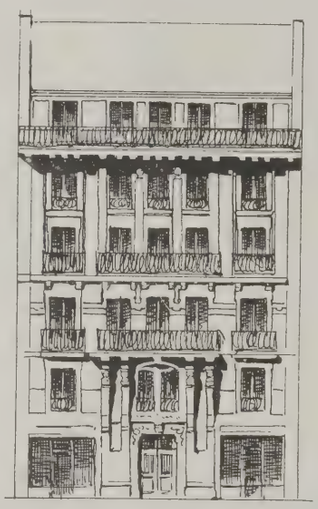


12.—No. 63 BOULEVARD DE SEBASTOPOL. GARNIER AND COULON, ARCHITECTS.

4. It sometimes occurs that the conflicting requirements of clients intending to occupy the same building will produce plans in which the fenestration of the rooms above will in no way agree with the openings of the shop fronts below. An escape from this difficulty may sometimes be found by making a pretence of moving the weight of the building diagonally across the elevation that the pressure may appear to rest ultimately on the piers between the shop windows. This has been brilliantly achieved by M. Amoudru in his design for No. 9 Rue du Conservatoire, Paris (Fig. 13). The cruellest analysis is needed to realize that the heaviest masonry of the elevation actually descends on to the largest opening, so cleverly is the eye tricked by the divided balconies, the massing of the brackets, and the double windows combined under the flat arch.

To the disciples of the modern school of architectural probity the employment of these methods may seem the base use of immoral deception, but it can be maintained that where the intrusion of the shop front violates the first principles of sound design, the means adopted for righting the defect are amply justified by their result.

The use of a series of round arches is an effective treatment of the shop front when the maximum window surface is not

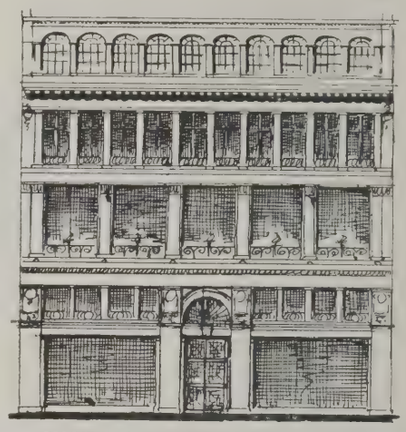


13.—No. 9 RUE DU CONSERVATOIRE. AMOUDRU, ARCHITECT.

required. It is particularly suitable to the display of such large goods as motor cars, the piers of each arch forming a frame which gives an added preciousness to cars behind it. It is, however, essential that the whole of the arch should be included in the ground story; any attempt to fill the tympanum with the window of an "entresol" will produce an effect of overcrowding on the window below, without providing the best fenestration for the "entresol" itself. A successful use of the arcaded front is seen in Mr. Curtis Green's new building in Piccadilly for Wolseley Motors, Ltd. (See frontispiece and later pages of this issue.)

A fresh field for composition is opened by buildings wholly intended for commercial purposes. Here the necessity for providing the comparatively small window area in the upper stories is absent, and the design is not complicated by a dual character in the façade.

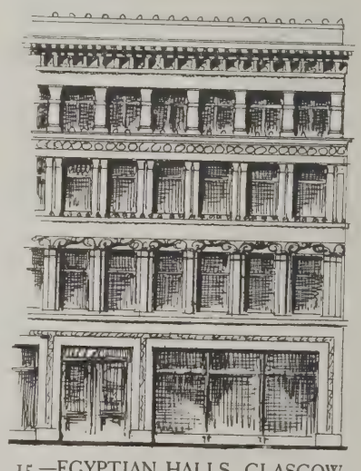
A manner of treatment which allows for the maximum lighting of each floor and at the same time is a natural outcome of the steel construction commonly employed for buildings of this nature, is that of using a series of vertical piers rising from the ground level to the main cornice and filling the intervening spaces in the upper stories with stone, or, preferably, metalgrilles, while the ordinary plate-glass window occupies the opening on the street level. A horizontal band above the shop front, together with the main cornice, helped perhaps by a low attic story above, effectually binds



14.—SHOWING SHOP-FRONT TREATMENT OF FIRST-FLOOR WINDOWS.

together the vertical elements of the elevation. Since it appears that the grill is but a light fitting and that the weight of the structure is carried by the vertical piers, there is no sense of undue pressure on the windows of the shop. A well-known instance of this method of design is Messrs. Selfridge's store in London, while in Paris the bazaars of M. Felix Potin in the Rue de Rennes, or the commercial building in the Rue d'Uzes, No. 13, show that the same system can be, perhaps should be, applied to a wholly metal treatment.

A method of handling the elevation of a building where smaller window openings are required in the upper stories than in the lower, with, at the same time, the retention of the maximum lighting sur-



15.—EGYPTIAN HALLS, GLASGOW. ALEXANDER THOMSON, ARCHITECT.

face, is that of doubling the number and reducing the size of the vertical supports at each successive stage of the façade, from the base upwards. By a gradual and progressive increase in the lengths of the lintels from the comparatively narrow spans of the openings in the highest story to the full width of the shop window in the lowest, the transition from the closeness of the supports above to the wide spacing of the piers below is

made without offence to a sense of structural possibility.

In the example shown in Fig. 14 an advertisement is made by a display of wares in the first-floor windows. An added effect of strength is obtained by setting the windows of an "entresol" into the main openings of the ground storey.

The use of a flat architrave to surround the top and sides of the shop window gives the double advantage of holding the interest to the show of goods while withdrawing the eye from the weakest part of the design. The surface of this frame, helped perhaps by a band of ornament following its outline, and unbroken by cappings or mouldings at the junction of the horizontal with the vertical members, hurries the attention from the weakness of the lintel to the solidity of the side supports, and by the same movement seems to collect the weight of the superstructure to the bearings which flank the opening of the shop front. This form of design is one which has had some vogue of late years. A nineteenth-century example is seen in the Egyptian Halls, Glasgow, by Alexander Thomson (Fig. 15), while many of the recent buildings in Kingsway, London, provide modern instances of its use in conjunction with an intermediate story and series of vertical piers above.

The owners of shops abutting on two adjacent streets find a benefit in having their doors at the angle of the building. The defects made by large glass windows between the solid ends of a façade can be mitigated by careful treatment, but a glass corner is fatal to good design. A shop door on a splayed angle of the premise should be flanked by solid piers, or it should be set back a few feet, giving room for the superstructure to be supported by columns to the left and right of the doorway.

The foregoing paragraphs have outlined the elements of the devices which may be legitimately employed to counteract the menace of disaster consequent on an effect of structural impossibility. Such an appearance will inevitably result from the needs of the tradesman and shop-owner of to-day, unless their requirements can be satisfied without an obvious sacrifice of the principles of composition.

The architect is faced by the problem of providing for the necessities of his clients and maintaining his ideals in his art; unless he can answer this dual demand on his skill, he will be but building, in more senses than one, mere castles in the air without any apparent basis of reality.

It will not be amiss to restate briefly the means by which he may solve his difficulties.

In the cases of buildings not used entirely for trading, but having shop windows on the lowest or two lowest stories, the effect of undue weight on the shop front may be counteracted by :—

1. A strongly projecting balcony placed over the first-floor windows.

2. The use of a deep canopy to mask the junction of the two characters in the façade.

3. The combined use of flat arches and a cornice or slightly projecting balcony above them.

4. In cases where the fenestration of the upper floors will in no way agree with the shop windows below, by making a pretence of moving the weight diagonally to a suitable support.

Buildings wholly intended for commercial use can be treated :—

1. By a series of vertical supports.

2. By increasing the number and reducing the size of the piers at each stage of the façade from the ground upwards.

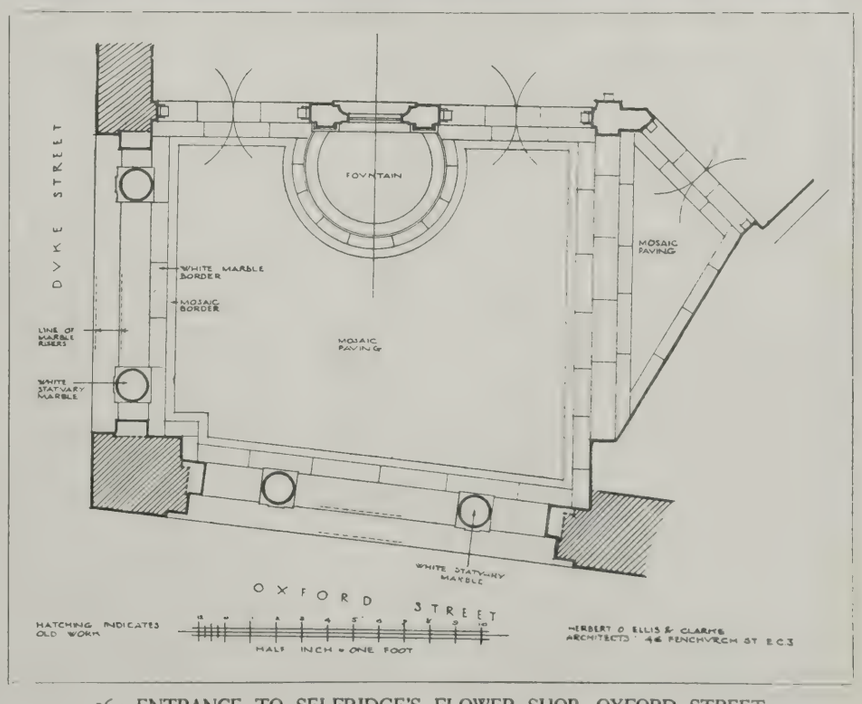
Lastly the window may be surrounded by a flat architrave, used alone or in conjunction with any of the methods here described.

In dealing with the shop window itself it must be remembered that its first and last purpose is that of advertisement. The importance of this fact justifies its repetition. Its form and character is dependent on the nature of the merchandise it is intended to display. Large wares will require large areas of uninterrupted glass, while small goods, which would be lost in such a vitreous expanse, are better distinguished in the smaller-paned window. Lettering must be clear and forceful, and placed where most easily read. Provided that these essentials are maintained, good design in these parts will not detract from their advertising qualities. It is, in fact, difficult to conceive where good design will not give an added distinction.

While the general impression made by the shop front should be a clear indication of the character of the shop it serves, there are many opportunities for the fanciful introduction of symbolic and appropriate ornament.

A splendid example of suitable treatment and decoration is seen in Mr. Vincent Harris's design for the Brompton branch of the Mac Fisheries, Ltd. (page 31).

It is to be doubted whether the custom



16.—ENTRANCE TO SELFRIDGE'S FLOWER SHOP, OXFORD STREET. ELLIS AND CLARKE, ARCHITECTS.

of "putting the best wares in the window" is always the most certain means of attracting customers or the best treatment for the goods themselves. A "sale of shop-soiled stock at sacrificial prices" is too often the result of such exposure. The setting back of the window and door to a distance from the building-front forms a vestibule or lobby which provides protection for the window and extends an ever-open invitation to prospective patrons. Drapers, while finding additional advertisement in the increment of wall-cases, recognize the arrangement as a method of enticement. The possibilities for decorative effect, without sacrifice of utility, in such a shop front have not been fully explored. Messrs. Ellis and Clarke in their entrance to Selfridge's flower-store (Fig. 16), and Messrs. Smith and Brewer in their shop for Messrs. Heal and Son (Figs. 17 and 18), offer unique suggestions of what the method might become.

Certain American stores have window cases made in the fashion of two-storied lifts, that while one floor is on view the other is in course of preparation, and thus the advantage of a quick change of exhibits is obtained. The adoption of the idea in this country, while securing to the firms who could justify the expense a similar advantage, would sometimes save us from that depressing spectacle of barren untidiness which a shop window at the time of "dressing" usually presents.

The illuminated and animated sign may well baffle the most sturdy designer. Importunate devices

in so strange a style,
Amaze th' unlearn'd and make the learned smile.

A well-armed Committee of Public Taste might make an abatement of the nuisance, but in so doing it would have to face the responsibility of interference with one of the most successful advertising methods which have yet been achieved. In this matter business firms might find a strong advertisement by following another American precedent in the illumination of their entire buildings by means of strong projectors—provided in every case that their buildings are worthy of such regard.

In the treatment of our shop fronts we have overlooked, as we have in many other matters, the attractiveness and decorative possibilities of colour. The French have made good use, on similar occasions, of coloured metal alloys, of enamels, and of coloured marbles and stones; the few cases of their employment in this country have proved them to be not unsuitable to our purposes. The pervading greyness of our shop blinds exhibits a neglected opportunity for the appropriate display of colour. Brightly striped or chequered, they would lend to drab streets a note of gayness and vivacity which their present monotony of tone can never achieve.

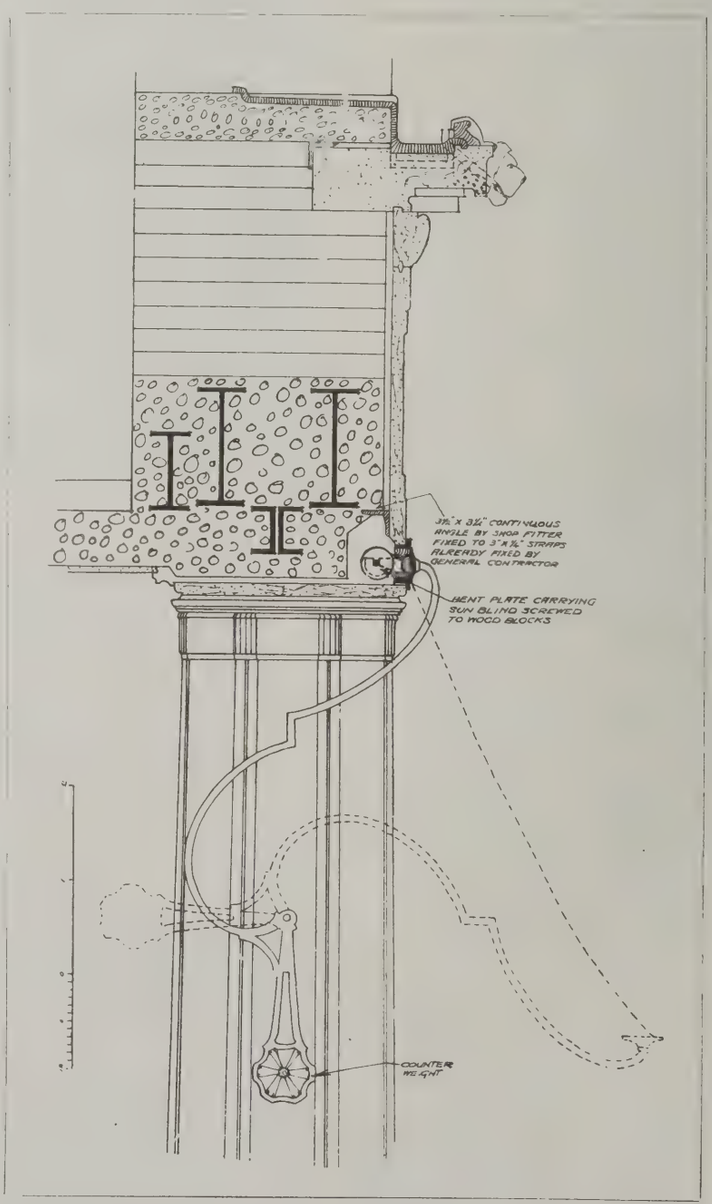
A short essay of this nature on the history and design of the shop front can do no more than indicate the important changes in its development and discuss briefly the principles of its composition. The proper relation of the modern shop front to the building of which it forms a part is a matter that has been long understood in France; in England it has been rare to find the occasion met with skill. It is only in comparatively recent times that English architects have seriously attempted a solution of this peculiarly modern problem. During the past fifteen or twenty years much progress has been made, but a general level of excellence will not be reached or maintained until the stigma which yet mars the name of trade has been blotted out, until the tradesman can make good taste his best advertisement.

Notes on constructional details are here subjoined.

Glass Fixing.—Plate glass shop windows are usually fixed by loose metal or wood fillets. Washleather should be inserted between the glass and frame to prevent rattling or cracking through vibration. It is essential that a space of at least half an inch should be left above the top edge of the glass. This prevents breakage by slight settlement of the building.

Flooring.—The most usual flooring is woodblock or parquet. Windows for greasy goods should be made with marble or tile floors.

Condensation.—Condensation on the window is caused by the warm air of the shop coming in contact with the cold glass of the window. It is prevented by keeping the glass warm, or the air next it cool. Warming the glass is expensive and not entirely satisfactory. The latter method is generally used. Air inlets are placed under the stall-board, and exits are provided at the top of the window. The warm air of the shop, leaving by the exits, draws a constant current of cold air through the inlets and across the window. This implies that the glass and air next it are of approximately the same temperature, and condensation is to a large extent prevented. The disadvantage of this method is that dust enters with the cold air. Electric fans assist the circulation, but aggravate the nuisance of the dust. Where they are used, air filters must be provided. Condensation in air-tight window cases used for the protection of jewellery, silver work, etc., is prevented by giving the case a double bottom, side, and top, and causing a circulation of cold air through the space so formed. This



17.—ARRANGEMENT OF SUN BLIND AT MESSRS HEAL AND SON'S PREMISES.

system is apt to break down in hot weather. Patent preparations for treating the glass have not proved successful in resisting condensation. No entirely satisfactory solution of the difficulty has yet been found.

Lighting.—(1) Natural: The depth of the window showcase should not be too great for its sufficient natural lighting during the day. If window lighting is required for the shop, the window case must be kept clear of the top of the window.

(2) Artificial: Lights must be inside the window, not outside. Top reflectors of metal or glass with half-watt lamps are generally employed. The light must fall on the object, and not on the eye. A scientific system of illumination will cast the light only where it is required, and so make a reduction in establishment charges. It should be possible to measure and check the illumination at every point. Sharp shadows, glare, and the consequent strain on the eye, must be avoided.

18.—PREMISES OF MESSRS. HEAL AND SON, LTD., TOTTENHAM COURT ROAD, LONDON. SMITH AND BREWER, FF.R.I.B.A., ARCHITECTS.

This cleverly designed façade combines the use of a flat architrave and intermediate supports with a series of vertical piers above. The spaces between the piers are filled in with stone grilles and windows, giving a large lighting surface for the upper part. The shop windows are set back some feet from the building front. This allows an uninterrupted expanse of glass without producing an effect of weakness in the ground stories, and allows an inspection of the goods without inconvenience from the traffic of the side walks.

19.—DYER'S SHOP, BOULEVARD DE COURCELLES PARIS. J. MARRAST, ARCHITECT.

Doors.—Revolving doors are too slow in operation to be suitable for shop fronts. Swing doors should be used, and so designed that they can be fixed open on warm days without making an obstruction.

Lettering.—Painted letters possess the single advantage of being easily changed. Dark metal letters on a white stone or marble fascia make a striking effect. Bronze should be lightly enamelled to prevent staining the stone, before the metal is oxidized. Metal letters filled in with coloured vitreous enamels are expensive but attractive.

Blinds.—Blinds can be fixed behind the top or bottom of the fascia, and if carefully designed need not be unsightly. The unpleasant appearance caused by the sagging of the blind rail can be avoided by adopting the methods used by Messrs. Smith and Brewer on Messrs. Heal's shop front. (See Figs. 17 and 18.)

The shop front by Marrast (Fig. 19) is designed on simple lines, and shows an effective use of coloured materials. The piers and lintel are of dark-veined marble, the caps and bases of green bronze, chiselled and gilt.

In Norway House, Cockspur Street (Fig. 20), the Scandinavian flavour is a good indication of the character of the office it serves. The flat architrave, of grey granite, joined by design and material to the entresol above it, gives a good impression of its weight-bearing capacity.

The architects were asked to plan a dignified lower front to Norway House, with an entrance worthy of the premises, the leading idea of which should express in design and material the national character and purpose of the building. The work consists of a new elevation to the ground and mezzanine floors and a new vestibule. The exterior is of Norwegian granite, which embodies the national coat of arms and the arms of Christiania, Stockholm, and other towns. Norwegian marble is used inside. The architects were Messrs. Johs. T. Westbye (Christiania) and F. T. W. Goldsmith, F.R.I.B.A. (London).

. . . .

The writer wishes to express his thanks for the help he has received in the making of this article to the Editors of THE ARCHITECTS' JOURNAL for the care they have taken in the preparation of the photographs, to the architects who have allowed their designs, and the firms their shop fronts, to be illustrated, to Mr. Dunbar Smith for the detail of the blinds of Messrs. Heal's shop front, to J. D. M. Harvey for his sketch of the music shop in the Hackney Road, and Mr. Hanslip Fletcher for permission to reuse his

(*Continued on page* 33)

20.—NORWAY HOUSE, COCKSPUR STREET, LONDON.
JOHS. T. WESTBYE AND F. T W. GOLDSMITH, F.R.I.B.A., ARCHITECTS

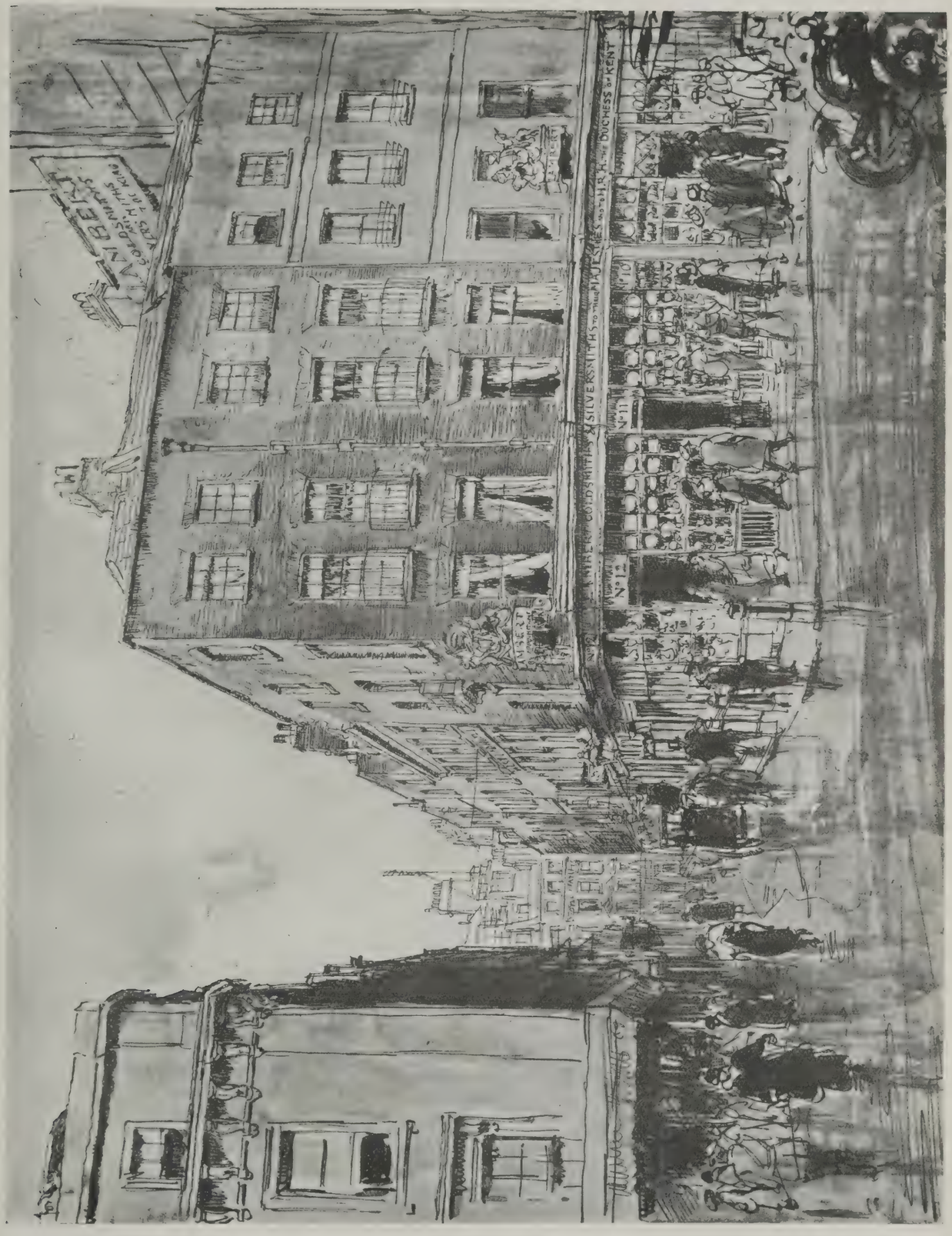
Shop Fronts. I.—Tobacconist's and Snuff Shop in the Haymarket, London

The old tobacconist's and snuff shop in the Haymarket is one of the few examples of eighteenth-century work in the West End that still remain more or less in their original condition. The simple bow fronts with their small panes of glass give the shop an attractiveness that is altogether lacking in many of the more pretentious modern fronts that surround it.

This front is the oldest in London. The exact date of its making is uncertain. It was first occupied by Samuel Horton, the celebrated confectioner. He was succeeded by Samuel Birch, Lord Mayor of London in 1815–16. The business was subsequently acquired by Messrs. Ring and Brymer.

Shop Fronts. 3.—"Lambert's," Coventry Street, London

From a Drawing by Hanslip Fletcher



This old silversmith's shop, although no longer used for its original purpose, loses none of its refinement or charm in its present character of a tea shop.

Shop Fronts. 4.—No. 19 Rue de la Paix, Paris

G. Morice, Architect

The Rue de la Paix offers more examples of delightful shop fronts than any other street in Paris. The jeweller's shop shown above, in addition to the striking simplicity of its design, has the merit of being really appropriate to its purpose. It is carried out in rich yellow marble with bronze enrichments.

Campbell and Adams, Architects

This is a good example of a small butcher's shop. The wide sliding sash gives the free circulation of air essential to a shop of this kind.

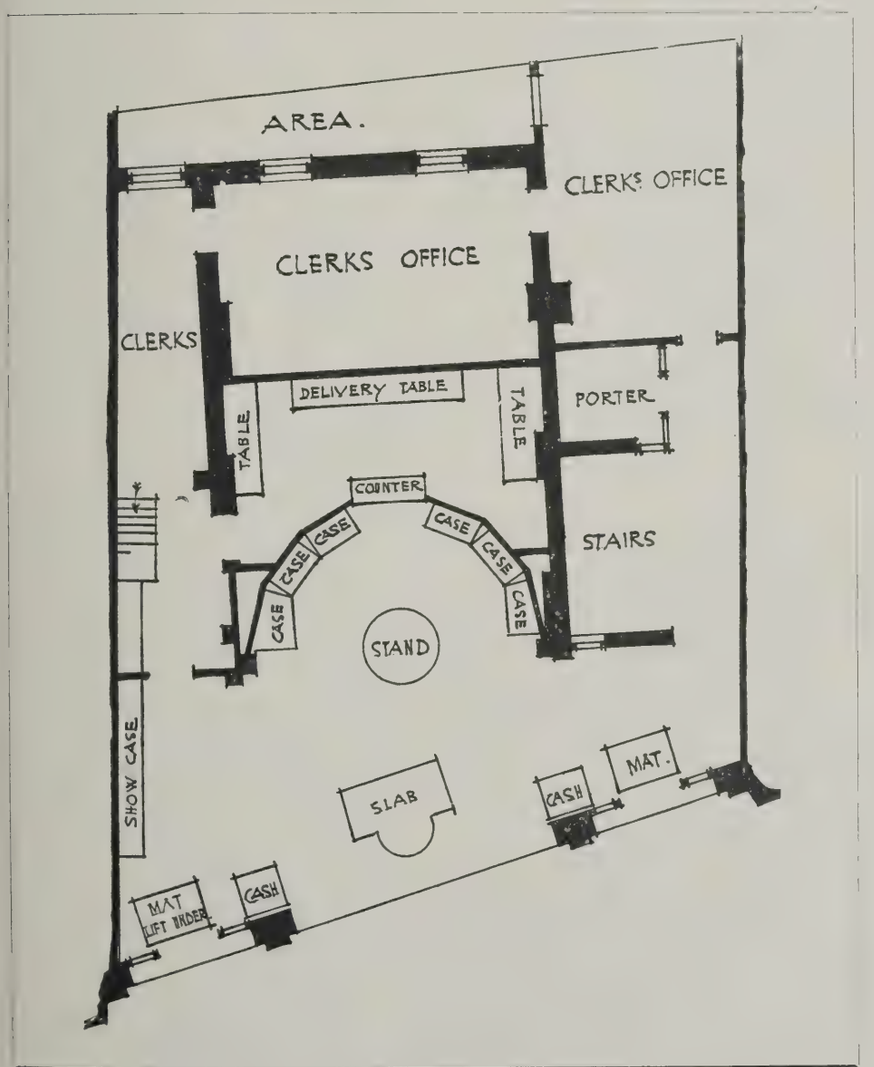
Shop Fronts. 6.—Fish Shop, 58A Brompton Road, London

E. Vincent Harris, F.R.I.B.A., Architect

Experience has not taught us to expect much refinement from a fishmonger's shop. That it may be had without sacrifice of utility is shown by Mr. Vincent Harris in his shop front for the Mac Fisheries, Ltd. The decoration of the door frames is appropriate to the character of the shop. The wide central opening is closed by five sliding panels, similar in design to the side doors; when not in use they are concealed by the marble-faced piers.

(*See plan on page* 33.)

SHOP FRONT OF THE INGERSOLL WATCH CO., LTD., KINGSWAY, LONDON.



PLAN OF FISH SHOP, 58A BROMPTON ROAD, LONDON.
E. VINCENT HARRIS, F.R.I.B.A., ARCHITECT

(*Continued from page 20*)

drawing of Lambert's, Coventry Street. He is indebted to Messrs. Sage & Co., and to Messrs. Humphries, Jackson, and Ambler for suggestions on constructional details, and to Mr. R. Brightwell, engineer, for information on the lighting of shop windows.

. . . . .

Experience has not taught us to expect much refinement in a fishmonger's shop, but that it may be easily secured without any loss from the utilitarian point of view is clearly shown by Mr. E. Vincent Harris, F.R.I.B.A., in his front for the Mac Fisheries, Ltd., in Brompton Road, a photograph of which is reproduced on page 31. Some particulars of the working arrangements of the front are given underneath the plate. The lay out of the shop is shown in the accompanying plan. It will be observed that the front is entirely open between the piers, these being of a sufficient scantling to satisfy aesthetic requirements but without taking up too much room. Within there is a considerable area of open space, ensuring free circulation around the stand and slab. Cash desks are conveniently arranged behind the piers already mentioned. To the rear an effective feature is made of a semi-circular array of cases with a counter in the centre. The shop was built by Messrs. Holland and Hannen and Cubitts, Ltd. The cast-iron panels were modelled by Mr. George Alexander, of Chelsea, and among the sub-contractors were Messrs. Strode & Co., for the metal shop front, and Messrs. Anselm Odling for the marble work.

The front for the Ingersoll Watch Co., Ltd., illustrated above, is a typical example of the general treatment that has been adopted in some of the newer buildings in Kingsway. It was carried out by Messrs. E. Pollard & Co., Ltd. The use of a flat architrave to surround the top and sides of a shop window is commented on by Mr. Burford on page 17.

E

Modern Commercial Buildings

1.—Their Design and Construction

By FRAZER TOMLINS

COMMERCIAL buildings, from an æsthetic point of view, are perhaps the most unsatisfactory type that an architect has to tackle. From the outset, all persons with whom the designer is brought into contact—and there are usually many concerned in such ventures—regard the matter from a limited and strictly utilitarian point of view. To put it simply, it is difficult to find a key-note to the design of such buildings. There is no spiritual idea to offer a suggestion; no particular atmosphere to be imparted; no special human aspiration to be symbolized; no very definite kind of human activity to provide for. These buildings are not homes, although many people spend half their waking hours in them. And so we are left floundering. We should know where we are if we have to do a church, a concert hall, a picture gallery, or a prison; but in commercial buildings there seems to be no more reason to be gay than tragic, so we can only be sober.

Types

Apart from such special types of commercial buildings as banks, insurance and shipping offices, and the kind of building eulogized by Calisthenes, commercial building in these days divide into two main types. There are those built for the use of a particular business firm, and those built as a speculation for letting purposes. The proportion in each class is perhaps about even.

The arrangement of plan in the former instance may be governed by some definite conditions (clients do not always know what they want) and have peculiarities; but it is the latter type which is tending to produce the new kind of building arrangement known as the "Commercial Building." It is this type that I propose to deal with—for the reason that it should be suitable to the requirements of most kinds of commercial activity. In passing, it may be noted that the general principles governing the design and construction of these buildings also apply, in the main, to the special types mentioned above.

The general type of commercial building usually has shops on the ground floor (to which the basement is often an appurtenance), and offices and showrooms or workrooms on the upper floors. Accommodation for heating has to be provided, lavatories for both sexes (principals and staffs), staircases, lifts, and fire escapes, and perhaps caretaker's quarters; lighting, telephones, and postal arrangements must be considered.

Planning

To begin with, one perhaps may not know whether the building will be let as a whole or in separate floors or parts of floors. Therefore, the planning of entrance hall, staircases and landings must be as elastic as possible, allowing the maximum dividing of separate lettable areas without corridors, and yet not cutting up floor areas into disconnected portions .The diagrams A and B show a good and bad arrangement for such a building on a square site between two party walls. Again, it might be better to have the staircase and landing in a more central position for the upper floors, as C, but, on the other hand, this might disadvantageously divide the ground floor, as D, which can only be let in two or more portions, whereas E can be let as one large area or in two or more separate areas if required.

I give these, not as a solution of any particular problem, but as an illustration of some of the elements to be considered in planning.

The plan problem must not only be governed by the shape of site, but also by the most likely commercial requirements of the locality, such as the demands for large or small shops and the kind of business for which the upper floors are likely to be used.

In the composition of these buildings one is confronted by a host of regulations in addition to more or less binding requirements; so much so that in some cases, particularly when the utmost accommodation must be provided on the site, the architect finds there is little left in the main form of the building to design. It is done for him by Building Act regulations and ancient lights. He becomes merely a sort of manipulator, seeking for any unforbidden space into which his building may expand.

Often in the matter of composition and proportion he is virtually helpless, and must content himself with constructional economics and careful finishings. If he has a mind for detail he will derive more pleasure in his work than one who thinks of architecture in bigger terms.

Construction

Three chief methods of construction are used in practice at the present day for commercial buildings. Although as a rule only one method is adopted, it is sometimes useful to combine them. They are as follows :—

(A) Construction under the 1894 Building Act.

(B) Steel-frame structure somewhat on the American tall building system.

(C) Reinforced concrete.

With regard to C, this may be partly of mass concrete with reinforced stancheons, beams and floors, and subject to most of the regulations of the 1894 Act, or it may be a reinforced concrete framed building.

Without going into theory, I propose to compare the practical application of these methods in the light of my own experience.

Method A is a combination of masonry, as an organic part of the structure, and steel used for internal supports and beams. The essential difference between this and method B is that all the masonry used in the building, particularly the external and party walls, is doing two jobs instead of one; that is to say that, whereas in B the masonry is used only as a screen against the elements, it is in this case used both as a screen and to support not only its own weight, but the weight of the floors and the super load that may be imposed upon it. This raises the question of the economics of building construction. For instance, in a framed building all external walls must not be less than 14 in. thick, and as none of these walls carry anything but themselves it will be seen that a large amount of superficial bearing surface is quite wasted, and that the steel does the work instead. This is particularly the case when we come to the upper floors of a building which need not be more than 14 in. thick. In a building of this class exactly the same amount of masonry that is required for the upper floors of a framed building enables one to dispense entirely with the steel. This is obviously a great saving.

At the present day, when building schemes come to a point of execution they are usually required to be completed in the quickest possible time, and the work has to begin very often before the architect has had sufficient study thoroughly to work out his design; and this is, I think, where method A of building is very useful, inasmuch as it is much more plastic in handling than the framed building, the steel for which must always be "cut and dried" before much work can be got on with. This more plastic method enables the architect to study his work further during the progress of building operations, on account of the structural methods being capable of alteration during progress.

The main disadvantage of this way of building is that one has to have thicker walls on the lower floors, and, of course, a certain proportion of floor space is necessarily lost.

The advantage of method B is apparent when it is desired to obtain the utmost accommodation on a small site, or where the ground is of such enormous value that an inch of floor space cannot be lost if the scheme is to be a financial success.

My experience is that in a comparison between the cost of a framed building and a building built under the 1894 Act, the latter is usually considerably cheaper—I might say always, if it is carefully and economically worked out, so that all piers are taking near about their maximum safe load. In speed I do not think there is much difference in the two methods.

Reinforced concrete is a slightly cheaper method of building than either A or B, but is not quite so expeditious. Its all-round advantages are so well known that I do not propose to make any further reference to them here.

Finishings

In considering the materials for internal finishing chief attention should be given to their durability and effectiveness without maintenance. This, while being true of all building work, is particularly so in the case of commercial buildings,

for two reasons. First, the people using the building usually do not make it their affair to keep an eye on the state of the internal finishings and fittings; and, secondly, it is most desirable to avoid renovation and repairs on account of the disturbance that is bound to be caused to the occupants and to the work that is going on inside. For instance, instead of putting wood skirtings and window boards in painted deal work it is better to put tiles, which are practically everlasting and always look clean and require no maintenance, apart from dusting or washing occasionally. Tile dadoes to corridors, and tile linings to window reveals, and tiles carried round as architraves are economical in the long run.

If all this is done, and doors are made of hard wood not highly polished, and the ironmongery is of bronze, it will be found that hundreds of pounds are saved in the upkeep of a large building every year.

All floor coverings should have a two or three-inch coved up-turn to the underside of the skirting, no matter whether they are of wood or other flooring material.

With regard to patent flooring materials such as asbestos and granolithic, these were very much in use immediately after the war on account of the shortage of timber, and will continue to be extensively employed on account of their cleanliness, fire resistance, and other favourable qualities.

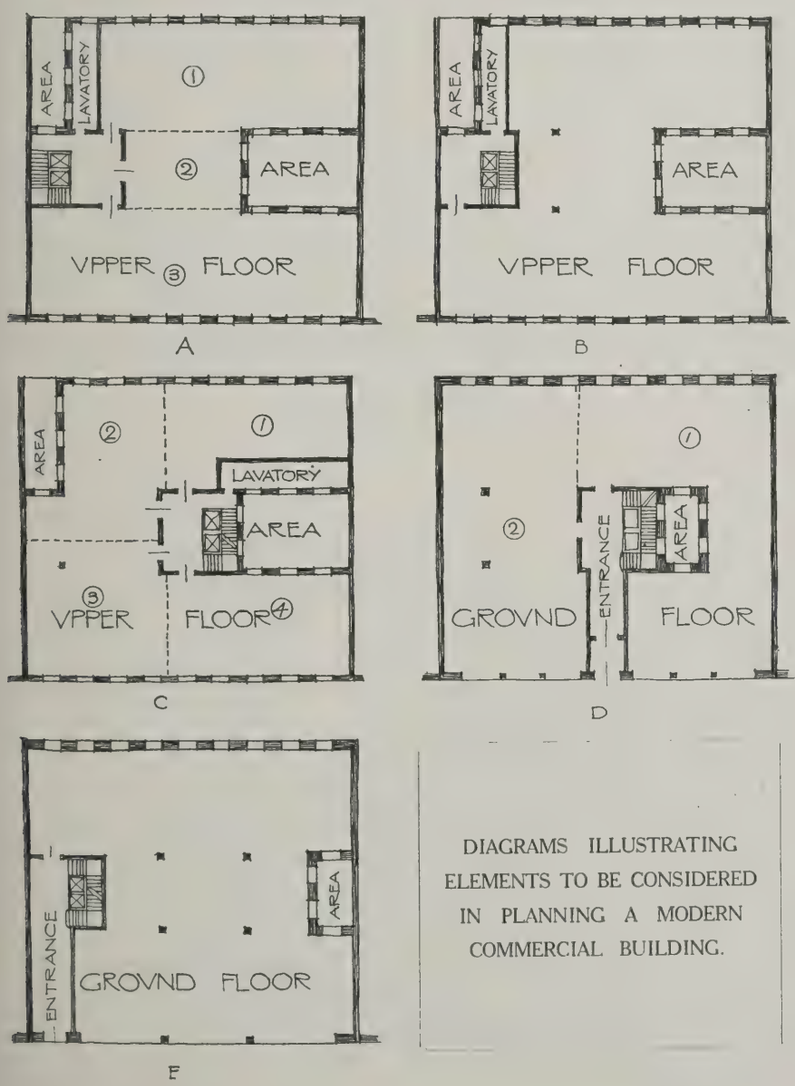
Again, metal windows are better than wood for the reason that there is less painting to be done, and they do not suffer from twisting or warping; and so the tenants of buildings are not so likely to wrench off the fastenings, which is so often done in the frantic effort to obtain fresh air.

Double-hung sashes should be avoided, because they are difficult to open if a table is in front of the window. They are also liable to stick if not made in hard wood, when they would be more expensive than metal casements. Care should be taken to arrange the opening of casements so that they can be easily cleaned from the inside. The best method is to hang the casements on top and bottom pivots, and the ventilators over on horizontal centres.

The problems of heating and ventilating are discussed elsewhere in this issue.

Electric Wiring

In arranging for the electric light wiring it is usually most satisfactory to carry a supply from the intake meter in the basement to serve the entrance hall, staircase, lavatories, and boiler house. A separate supply should be taken up to serve the various floors, and arranged so that a meter can be put on the inside over each entrance door from the main landings. The floors should then be wired for about one four-way distribution box to every 200 superficial feet of floor space.



DIAGRAMS ILLUSTRATING ELEMENTS TO BE CONSIDERED IN PLANNING A MODERN COMMERCIAL BUILDING.

Lifts, Etc.

In a building of over 10,000 superficial feet of floor space there should be two lifts of varying speeds, say, 250 ft. and 350 ft. to 400 ft. per minute, capable of taking five or six passengers each. Two small lifts as above are very much more efficient than one large one. The subject of lifts is also fully developed elsewhere in this issue.

In office buildings of any size a letter chute should be placed running down a side wall of the landings to a post box built in the wall of the entrance hall so that letters can be posted at each floor level, the key to the box being held by the post office. These chutes should be about 12 in. wide and 3 in. deep and lined with hard wood or metal.

Æsthetic Considerations

Proceeding to æsthetic considerations, it is much easier to produce a merely efficient building than one that also has an intrinsic beauty and charm, and is pleasurable to work in. A point, *en passant*, is the craze at the moment for introducing a glorified type of factory composition and fenestration. This, I think, is due to two reasons, each based on an erroneous idea: the first a misconception of the resulting effects of huge glass areas in windows, and the second a topsy-turvy notion of the meaning of the catch phrase "big scale."

A large amount of good lighting, particularly that which is thrown to the back of the room, is obtained by reflection from the wall faces on the other side of the street. It will be found that if on two sides of a street buildings are 90 per cent. window opening and 10 per cent. Portland stone they will not be proportionately better lighted inside than if they were 50 per cent. each of solid and void.

Windows, doorways, and heights of offices and so forth have a relation in size to the stature of man. When windows are so large (sometimes taking in two or three floors at once) and horizontal story divisions entirely lost, the bigness of a building disappears.

Façade Treatments

In most cases the elevations of these buildings are only a façade between two adjoining buildings. This leads to a general consideration of the treatment of city street fronts. In towns, certain axial thoroughfares might be treated with blocks of buildings with façades forming continuous and balanced designs, but the treatment of all business streets in this way is not to be recommended. Many boulevards in Paris, for instance, are very monotonous on this account. Individuality of character may create interest, but there can be no doubt that the best results are obtained by keeping to a simple multiplication of units in each façade.

Too much striving after interest and "features" by inordinately clever designers with a vision bounded by party-wall centre lines is the cause of so many "might have been fine buildings" being spoiled. Contrast and interest are usually there in superabundance in the remainder of the street.

At the moment there is a prevalence of pretentious ostentation in commercial buildings. While in some cases this is due to the desire for advertisement on the

part of business firms, or a desire to provide for this by building speculators, in most cases it seems to be the fault of the architect, who, having obtained a big job, wants to make a "big splash." Even so, the end he has in view is not gained. His "jostling" neighbours are making similar splashes. The result is only that any organic form and composition that the building may have is lost in the spray of detail under which his building is smothered. This display often defeats the desire of the owner for the distinct individuality of his particular building as his boundaries tend to be more obscured by frittering away organic form, proportion, etc., under a miasma of "ornament."

One has looked for an order of importance in city architecture, wherein such comparatively unimportant structures as commercial buildings should be of an unobtrusive character—a kind of background of building from which the more important public and cultural buildings stand predominant by reason of their more complicated functional massing of composition, and greater glorification. It seems that the reverse will have to be the case, and that to obtain any distinction from its surroundings a public building in the future will have to be four square walls with the very simplest of holes cut in them for windows and entrances, etc. The present inverted state of affairs is like shop-walkers wearing ermine robes and golden crowns, and kings and princes only bowler hats and short jackets.

2.—Lift Equipment of Modern Commercial Buildings

THE development of buildings during recent years in the direction of increased heights and areas has made it essential to have a proper installation of lifts for conveying passengers to the various floors. The modern buildings in Kingsway, having a rise of about 120 ft. from the lowest floor to the top, are typical examples of current practice.

In a great many cases proper consideration is not given in the design of the building to the question of a sufficient lift service, and in some instances the number of lifts provided is not equal to the requirements, or the arrangement is not the best from the point of view of efficiency and economy.

In designing a building it is desirable that attention should be given to the number of persons who are likely to occupy the upper floors, and also to consider the traffic which will occur at the busy hours of the day—in the morning when the staffs are arriving, in the middle of the day, and again at evening, when there is a rush to leave the building. Probably at these times a number of persons equal to about half the population of the building has to be handled in a period of from 15 to 30 minutes.

The most efficient way of dealing with the problem is not so much to have larger lifts as to have a larger number of lifts, and it is not advisable to provide for a greater number than fifteen passengers in one lift, allowing about 2 ft. square in floor area per passenger. In lifts carrying a larger number of people much time is lost in loading and discharging the passengers, and a quicker service is obtained by having more lifts; and there is the further advantage that if one lift should be out of action an effective service can still be maintained with the others.

It has been found by experience that the most efficient service is obtained by grouping the lifts together in one part of the building, either in one shaft adjacent to the main corridor, as in the case of Shell Corner, Kingsway, or on two sides of the corridor, a plan which has been adopted for Bush House, Aldwych, and also for Messrs. Peter Robinson, Ltd., of Oxford Street.

If a sufficient number of lifts is provided, the most suitable plan is to allot some of them to different floors in the building, some serving the lower floors, stopping at every floor, and one or two lifts, according to the capacity of the building, being arranged to travel "express" to the upper floors. This allows these latter lifts to be run at a higher rate of speed.

For lifts serving eight floors the speed should be about 200 ft. to 300 ft. per minute; for ten to twelve floors at 300 ft. to 350 ft. per minute.

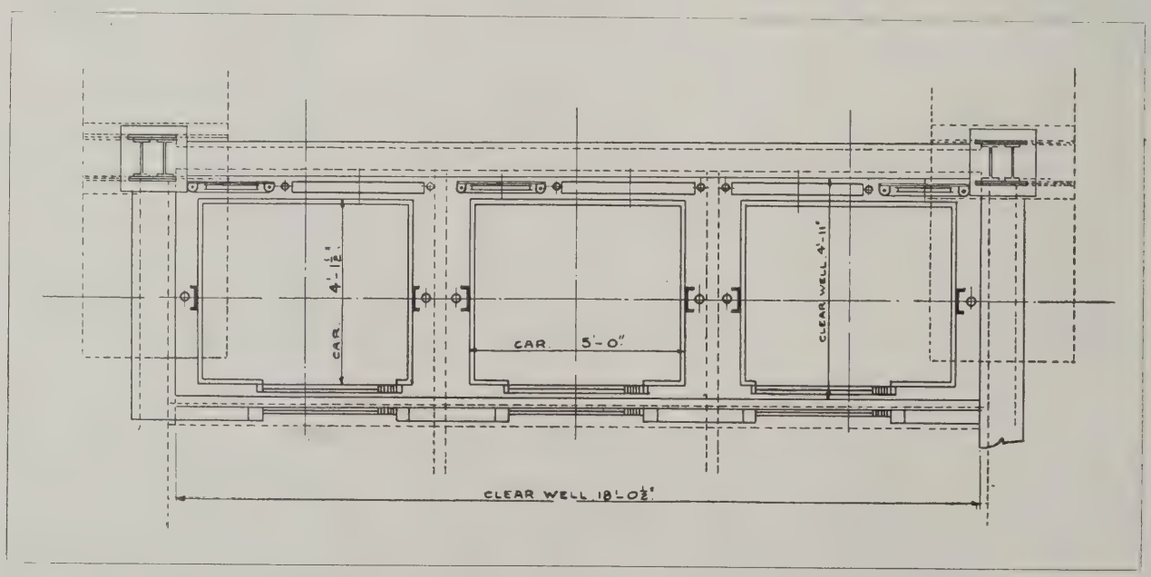
The ideal arrangement, from an engineering point of view, is for the machine to be fitted directly over the lift shaft, and provided that the driving sheave on the machine is made of large diameter, so that the ropes will lead directly from the car at one side to the counter balance weight on the other, this gives the best life for the lifting ropes. If the machine is fitted with smaller driving sheave, so that a diverting sheave has to be provided to lead the ropes to balance weight, the life of the ropes will be materially reduced.

If the machine is fitted down below, which, of course, gives the advantage of being fitted on a solid foundation, the ropes have then to be led up over top wheels involving twice as great a length of rope, and consequently the cost of renewal is considerably increased.

If the building is constructed so as to avoid any danger of vibration the advantages of putting the machine overhead are considerable.

It might appear at first sight as if there would be an advantage from the point of view of building construction to put the machine below, but, as a matter of fact, the top load on the building is somewhat greater than if the machine is fixed directly overhead, as, owing to the ropes having to be led up and over top wheels and then down to the car and balance weight, there is double the weight on the top sheaves due to the pull on the ropes, which is usually a greater load than that which is due to the weight of the machine itself when fixed overhead.

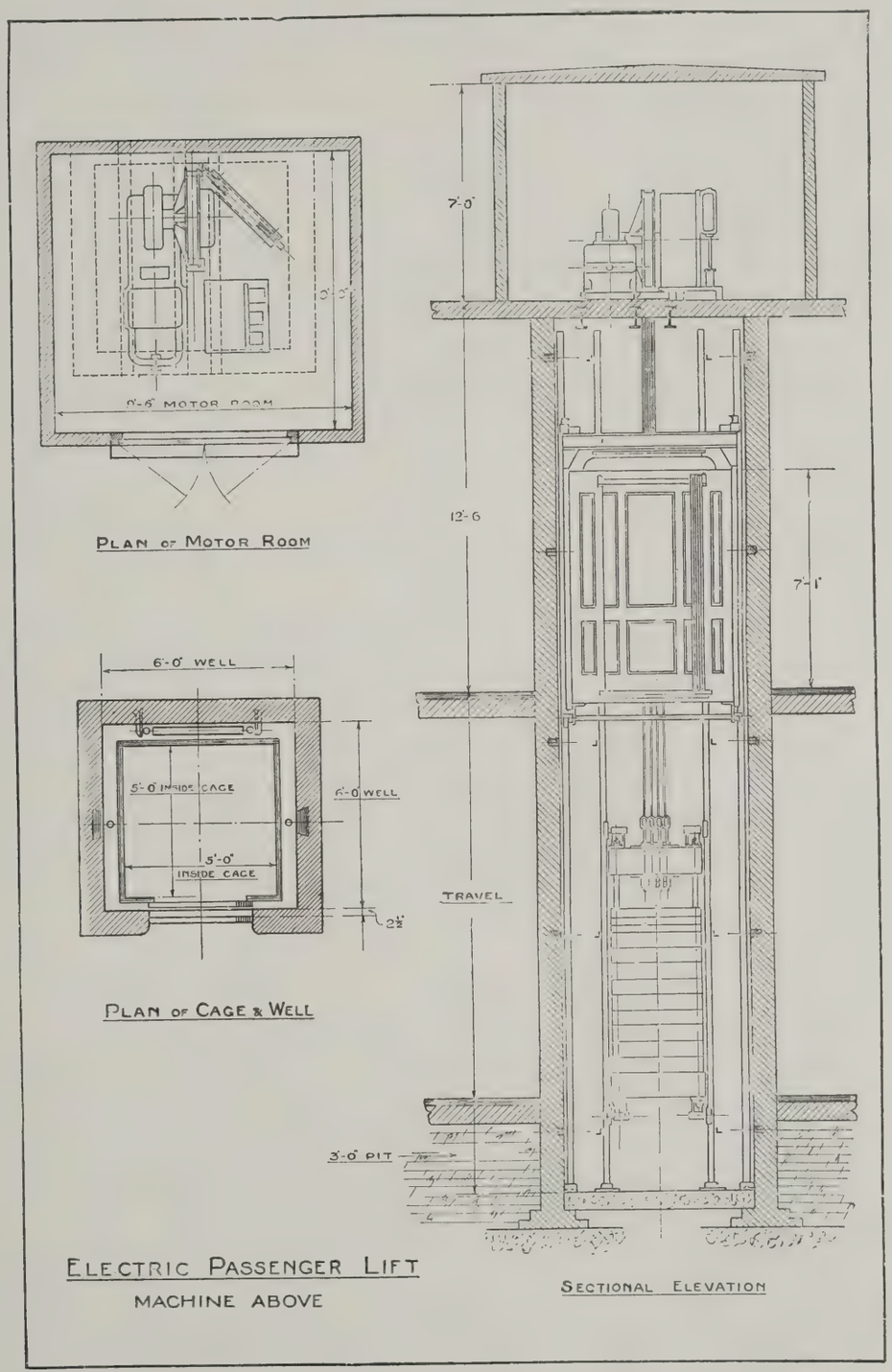
It is of greatest importance in a busy building that the lifts shall be of the most efficient type, and it is the worst idea of economy to save a few pounds on the first



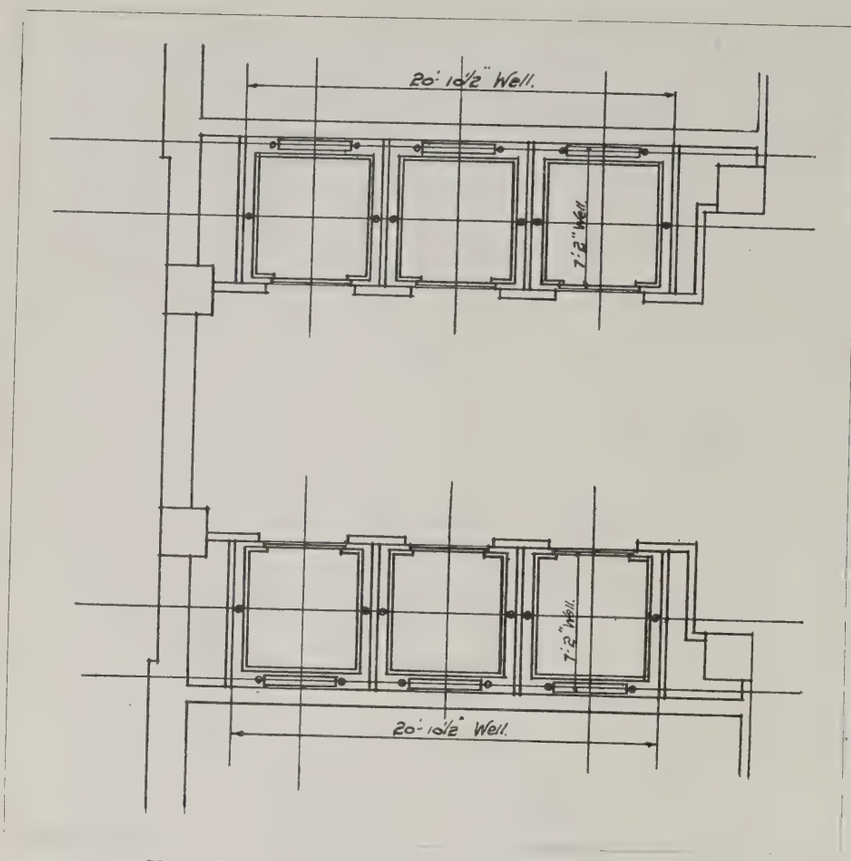
PLAN OF PASSENGER LIFT INSTALLATION AT SHELL CORNER, KINGSWAY.
(10 cwt. load. 300 ft. per minute.)

cost of machinery of this kind upon which the life of the building so largely depends. To provide a good service of the best class lifts, so as to be able to deal with all the needs of a building, will repay the extra expense in the value added to the occupational usefulness of the building.

Where a number of lifts are provided it is desirable to have some method of indicating to an intending passenger which lift to take. For the lifts running continuously from the lowest floor to the top and down again, direction lights fitted over the doorways to indicate in which direction the lift is travelling will be found most satisfactory. If, however, lifts are driven intermittently, that is to say, are liable to be sent up part of the journey and then returned to the ground floor to fetch other passengers, a position indicator fitted alongside each lift on each floor



A GOOD EXAMPLE OF AN ELECTRIC PASSENGER LIFT INSTALLATION



PLAN OF PASSENGER LIFTS, BUSH HOUSE, ALDWYCH.

showing the position of the lift in the shaft, with a light indicating in which direction the lift is travelling, is then the best arrangement. Examples of indicators of this kind may be seen at Selfridge's, John Barker, Finsbury Circus House, and a number of other places in London.

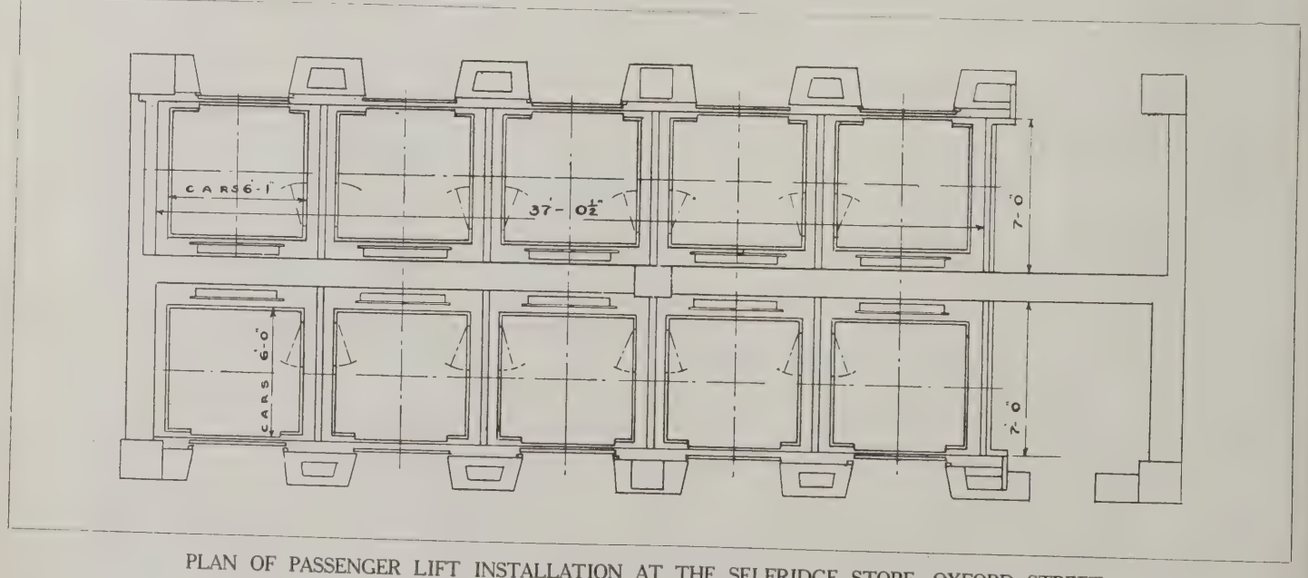
Where lifts are working in closed shafts which are liable to be somewhat dark, it is an advantage to introduce an illuminated threshold so that the passenger can have no uncertainty in stepping in at the entrance. This is, perhaps, specially suitable for automatic lifts in private houses.

There is also an automatic levelling device which has been introduced, and which will probably form part of the best lift equipment in the future. This device is arranged to bring the floor of the car exactly level with the floor of the building, and thus avoids the need to step up or down to enter the car. This is an additional advantage, for whereas an inexperienced or unskilled operator generally makes two or three attempts to reach the floor level, with consequent loss of current and unnecessary wear and tear on the lift machinery, with this apparatus uncertainty is entirely avoided, and an absolutely accurate stopping is automatically secured.

The lift car, being the portion of the apparatus which is most seen by the public, deserves particular attention. Lift cars can be built in hardwood or, where preferred, can be constructed in steel, which can be suitably finished in various shades of enamel or bronzing. A bronzed car with a bronzed gate at the entrance has quite a handsome effect.

It is of the greatest importance that a lift should be fitted with thoroughly efficient safety appliances to guard against accidents which might possibly arise. The most obvious is the failure of the suspension ropes, and this is met by means of an arrangement which should be fitted underneath the car with a system of grips to lock the car to the guides upon which it works in the event of the failure of the suspension ropes. In the case of high speed lifts it is desirable to have an apparatus which will come into operation gradually and so avoid a sudden shock which might otherwise occur. An apparatus of this kind is operated by a governor, which is set to work when the car descends at an excessive speed, whether due to breakage of ropes or any other failure. Suitable arrangements should also be provided at top and bottom of the lift shaft to prevent over running in case of any failure in the controlling apparatus.

In the case of large buildings it is an advantage to have an additional lift for use by the staff and for carrying books, coals, etc., to the top of the building, especially where there may be kitchens at the top for providing staff meals. A lift of this kind may be very conveniently arranged with automatic push button control, running at a speed of about 100 ft. to 130 ft. per minute. A single call button is fitted at each level to bring the car to a floor as required, and a series of despatch buttons provided in the car by which it can be sent to any floor by the person riding in the car. Special provision is made so that when anyone enters the car the outside buttons would be automatically put out of action, so that the control of the lift cannot be



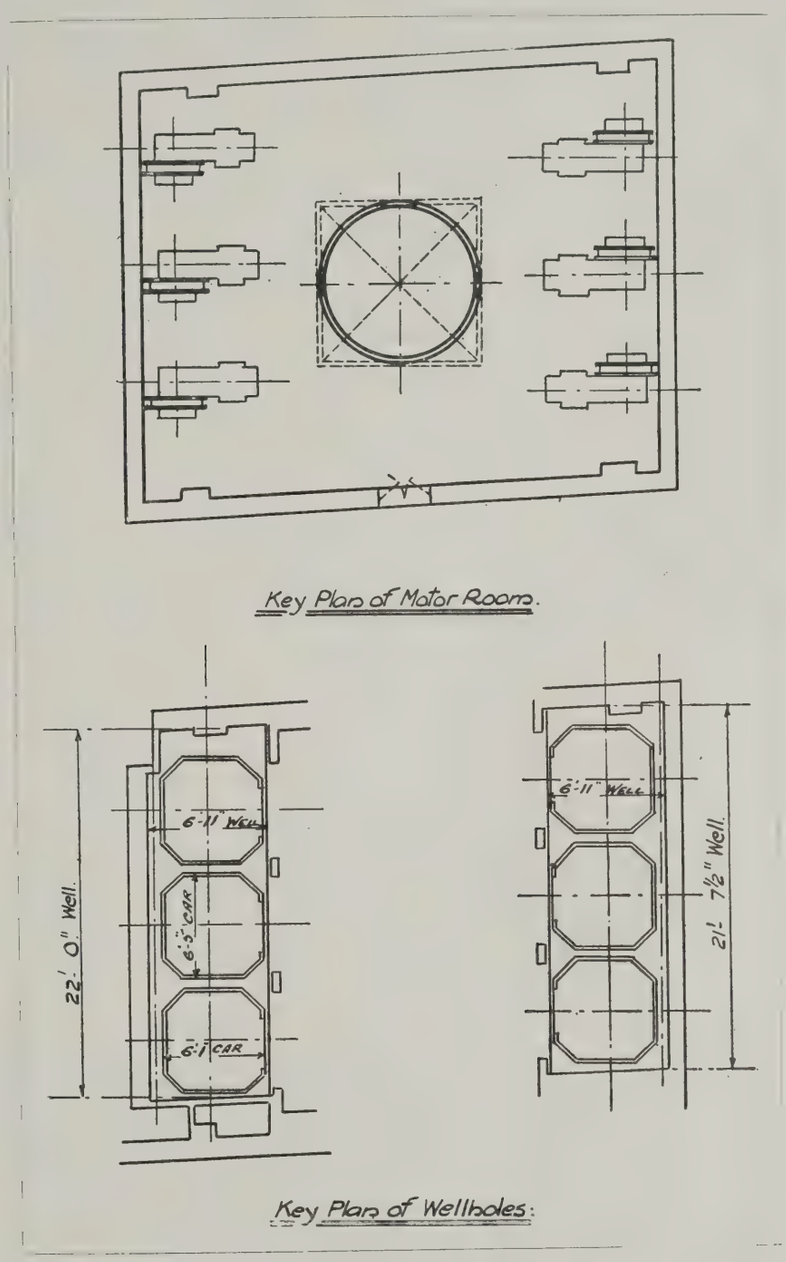
PLAN OF PASSENGER LIFT INSTALLATION AT THE SELFRIDGE STORE, OXFORD STREET.
(20 cwt. load. 300 ft. per minute.)

interfered with until it has completed its journey. This system of control is also suitable where a small lift is required for the special use of directors or other persons in a building, but this form of control is not recommended for one which is likely to be used by a number of passengers, in which case it is always desirable to have an attendant who would be responsible for seeing to the opening and closing of landing doors.

Collapsible gates have the advantage of not taking any space on the landings.

In any case the doors or gates on the landings should be fitted with interlocking arrangements designed to prevent the lift from being started unless all the doors are properly closed, and to prevent any door from being opened unless the car is at that particular floor.

It is of great importance to provide a motor room of sufficient size, arranged so



PLAN OF PASSENGER LIFT INSTALLATION AT PETER ROBINSON'S, LTD., OXFORD STREET.
(17 cwt. load. 300 ft. per minute.)

The openings on the landings may be protected by doors, or by collapsible gates, as may be most convenient. Hinged doors are generally to be avoided as they occupy space on the landings and get in the way of passengers waiting for the lift. Sliding doors can be arranged to open in the centre and fitted with sympathetic hanging gear so that the two halves slide simultaneously and thus take less space than a single sliding door.

as to give convenient access to the machinery for adjustment. It unfortunately happens in a good many cases that a building is designed without sufficient consideration of this point, and the machinery has to be put into some inconvenient corner where the lead of the ropes is not satisfactory and where it is difficult to give proper attention to the machinery.

In designing a building an architect probably calls in specialists on a good many points and consults them before making his arrangements; but in many cases a lift engineer is expected to adapt his machinery to a space which may be quite satisfactory from the architectural point of view, but which does not lend itself to make the best arrangement for the lift.

It is essential that after machinery of this kind has been installed it should be properly looked after by competent engineers, preferably by the manufacturer of the lift, who would have a special interest in keeping the machinery in good condition for the sake of the recommendation which will arise from an installation which gives complete satisfaction to the occupiers of a building and, consequently, to the owners. (For the illustration of an electric passenger lift installation, reproduced on page 37, we are indebted to Messrs. Waygood-Otis, Ltd.)

3.—Heating and Ventilating of Modern Commercial Buildings

By A. J. WELLS, M.Amer.Soc.H.V.E.

IT would be a platitude to say that a modern commercial building erected without central heating and means for ventilation would be considered incomplete in its essential equipment. Nevertheless, the attention bestowed upon this branch of building engineering is not always proportional to its importance, and many buildings can boast of thoroughly up-to-date improvements in nearly every direction except in heating and ventilation.

In domestic work the method of heating by the open fire still has a large number of advocates even though its limitations are well known, and it must be admitted that while high grade bituminous coal is obtainable at a reasonable price, the open fire will continue to hold its own. But in commercial work the conditions are such that make the heating capacity of open fires totally inadequate to deal with the demands, and the problem resolves itself into determining which system will be capable of producing a comfortable and healthy atmosphere throughout the entire building for the minimum amount of labour and expense. Although "first cost" is a very important item, it should not be considered as the criterion which determines the particular system to be installed, irrespective of suitability, convenience, labour, and cost of maintenance. The "first cost" is simply the value of the apparatus in terms of labour and materials, and in no way indicates the service or satisfaction it will give.

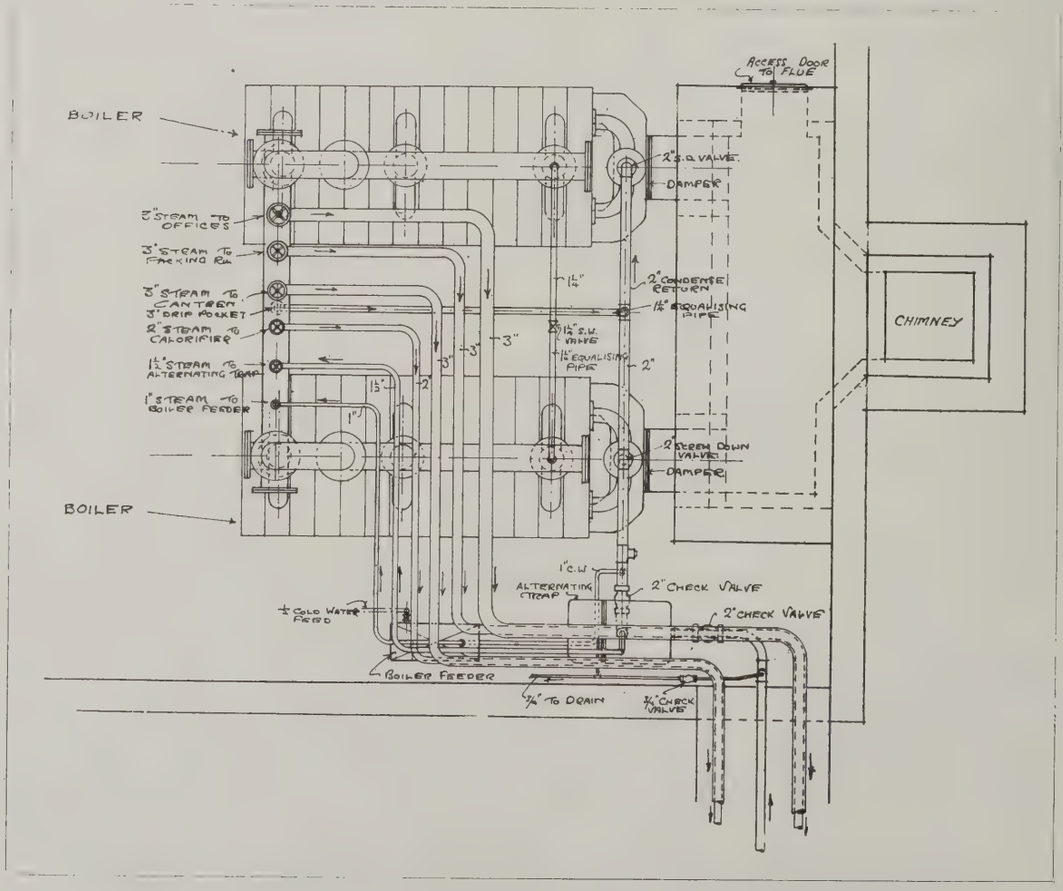
Let us analyse the advantages of an efficient central heating system in a commercial building—I say "efficient" advisedly, because I know only too well that a large number of systems, installed by incompetent so-called engineers, do anything but heat.

First, the planning of the building is simplified considerably because the absence of innumerable fireplaces and chimney-breasts enables the architect to use a free hand in determining the positions of internal walls. This simplification is particularly advantageous in large office buildings. Whereas a few years ago each room was necessarily provided with a fireplace, and therefore had to be arranged according to the positions of the chimneys, it is now possible by installing a central heating system to provide whole floors of extremely large area, and without a single partition or internal wall. This makes it possible to give a tenant either a floor, or a portion of a floor, divided up according to his particular requirements.

Secondly, as the planning is simplified, so is the builder's work. The number of fire-grates, hearths, chimney-breasts, chimney-stacks, lead-flashings, etc., is considerably reduced, and the saving in cost thus effected should be credited against the first cost of the heating apparatus. Naturally, the larger the building, the greater saving will the central heating effect in the builder's work. Furthermore, in office buildings particularly, every square foot of floor area is of sterling value; if the building is heated by fires, think of the floor area occupied by the numerous fireplaces! A fireplace is a very bad tenant—utilizing valuable floor space but paying no rent.

Thirdly, there is the cleanly atmosphere which it is impossible to secure if open or anthracite fires are used, for apart from the soot and dust deposited on every article of furniture due to the raking out and lighting of the fires, the conveyance of the coal from the store to the offices generally gives rise to an atmosphere of coal dust in lifts and corridors.

Before dealing with the advantages of any particular system, I should like to say a word about the importance of "design." The success of an installation depends upon correct design and calculations, and it is no exaggeration to state that the success or otherwise of a system is determined "on the drawing board" before even a pipe or radiator has been fixed. No matter how excellent the materials used, or how proficient the workmanship, if the scheme has been designed without due regard to the scientific fundamental principles, the installation will give endless trouble, and will probably mean removing the whole system after a long period of intense discomfort. It is far cheaper and infinitely better to have a



1 (*a*).—BOILER CONNECTIONS FOR A MEDIUM-SIZED VAPOUR SYSTEM: PLAN.

system correctly designed in the first place, than be compelled to remodel and "tinker" with it after erection.

The type of heating system best suited for any particular building cannot be determined until the demands and plans have been studied, and the conditions under which the system must work have been thoroughly considered. Many engineers take the absurd attitude of advocating for all buildings, only hot water—others, only steam; some prefer gravity systems while others confine themselves only to accelerated work, and so on. Thus a client is often burdened with an apparatus which is totally unsuitable for his needs simply because no attention has been paid to the working conditions, or the designer holds biased opinions.

Generally speaking, the advantages of hot-water and steam systems are as follows :—

Hot Water.

(1) Temperature of rooms can be regulated at the boiler by reducing or increasing the temperature of the water.

(2) Less attention required in stoking than in steam work.

(3) Less likely than steam to produce marks on walls and ceilings.

Steam or Vapour.

(1) Quick heating up. In a good system steam should start circulating about half an hour from lighting fire.

(2) Risk of freezing and bursting of pipes in cold weather while the apparatus is idle reduced to a minimum.

(3) Less damage if pipes suddenly start leaking.

(4) Less heating surface required than with hot water, owing to higher temperature—therefore less floor space occupied.

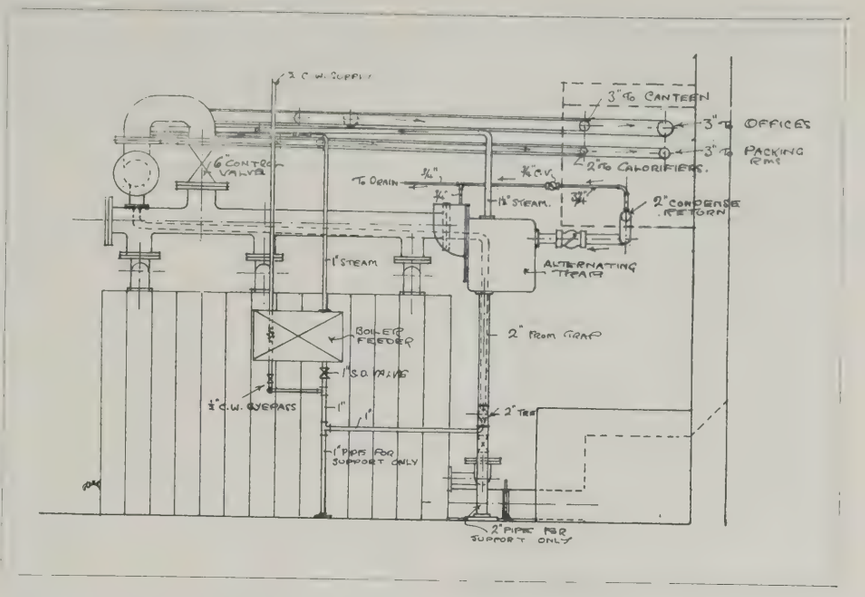
(5) Less fuel used during the banking-up period at night.

In office building work the heating engineer must remember that one of the greatest advantages of central heating is that, as already stated, the floors can be divided up to suit the tenant's requirements. Therefore, he should design the system so that radiators can be added or removed, enlarged or reduced, and rearranged in positions to cope with the conditions demanded by the erection of new walls and partitions, without in any way affecting the balance or circulation of the heating medium. There is no reason why an installation cannot be designed to take care of these additions and alterations; plugged tees should be left at convenient points, in the same manner as electric light plugs are left, so as to facilitate the connecting up of new radiators.

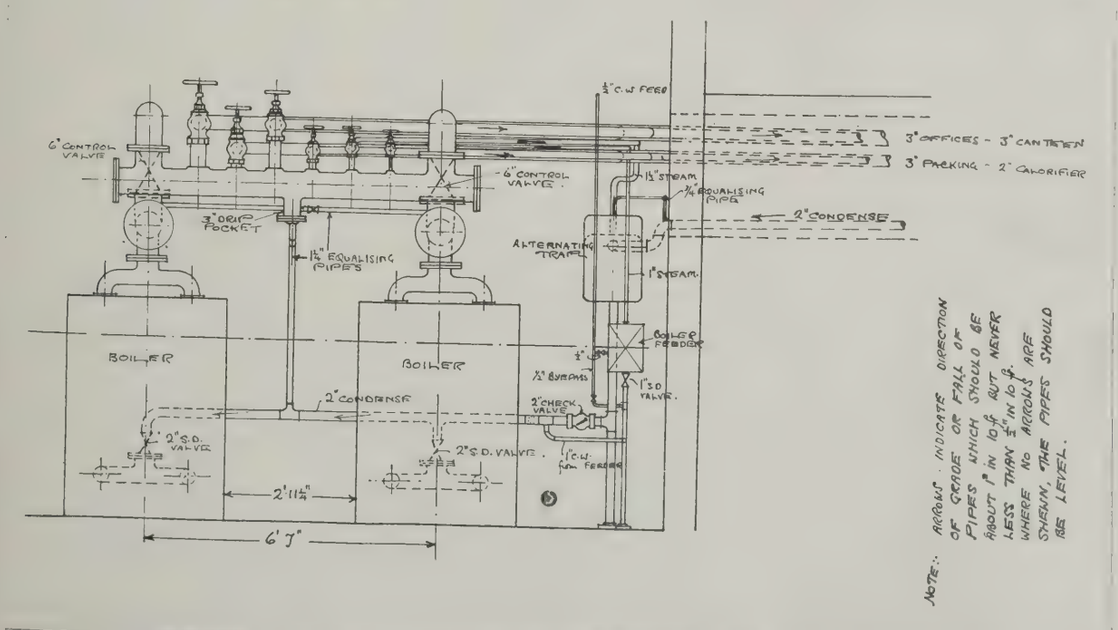
Each circuit should be under the control of valves and be provided with an emptying cock, so that, in the event of alterations and additions, the circuit which is affected can be shut off and emptied without disturbing the other portion of the system.

It will always be found that a better circulation of water will be produced if the main flow pipe is taken to the highest point in the building before supplying any radiators; by this means extra circulating pressure is obtained over that which is generated by the underground system. In buildings containing a large number of small rooms it will be found an advantage to use the "two-pipe" system, because of the equal temperature in the radiators. If the "one-pipe" system is adopted it is likely that the first rooms to be served by a circuit will be over-heated, and the others under-heated; this is due to the excessive drop in temperature on the circuit main.

It is of primary importance that the system be so designed as automatically to free itself of air, and the fewer number of air-pipes necessary to accomplish this the better. All air-pipes should, if possible, turn over the cold water tank; if they protrude through the roof, apart from looking unsightly, the risk of freezing is increased.



1 (*b*).—BOILER CONNECTIONS FOR A MEDIUM-SIZED VAPOUR SYSTEM: SIDE ELEVATION.



1 (*c*).—BOILER CONNECTIONS FOR A MEDIUM-SIZED VAPOUR SYSTEM: FRONT ELEVATION.

If it is impossible to design the system to work by gravity, then centrifugal pumps should be used as a means of accelerating the circulation. In designing accelerated systems, the "one-pipe" method should not be used because no matter how high a velocity is attained in the mains, the circulation through the radiators is not affected. The pumps should be fixed in duplicate, so that in the event of one breaking down the other can be used.

In dealing with steam systems I should prefer, instead of using the word "steam," to call them "vapour" systems, because so many individuals consider that a steam system is likely to "blow up" at any moment. As a matter of fact, the pressure at the boiler should not be more than 2 lb. per sq. in., which is far less than the static pressure exerted by the average hot-water system. It is, however, unusual to associate "vapour" with "pressure," or to attach any danger to its use in heating.

Vapour Systems

Broadly speaking, vapour systems can be classed under two headings :—

(1) Gravity, or natural circulation.

(2) Mechanical circulation.

The "mechanical" part of the system usually consists of a vacuum or suction pump, expelling the air and water from the condense mains, thereby assisting the flow of vapour to the radiators. These systems are known under various names, such as : vacuum vapour, vacuum steam, atmospheric steam, etc. It is impossible to explain, in the limited space allotted, the individual characteristics of the numerous "gravity vapour" systems now on the market—especially in America. Some are excellent, and worthy of notice, but many simply burden the owner with the extra cost of innumerable patented fittings and devices which serve no useful purpose other than requiring the constant attention of a skilled mechanic.

It is absolutely essential for the successful working of the system that :—

(*a*) The vapour which enters the radiator flows away only in the form of condensation.

(*b*) The air must be removed in a efficient manner to allow the vapour unrestricted space in the flow pipes and radiators.

(*c*) All condensation from the heating surfaces must be returned as quickly as possible to the boiler.

(*d*) The vapour pressure must be under control at the boiler.

The boilers must be of ample capacity, and should be capable of working a maximum load without being forced. They should be provided with cleaning doors so that the heating surface can be kept free from soot; and where make-up water is often required, as in laundry and cooking work, mudholes and manholes should be provided. It is important that the boilers be so designed that a large water surface is obtained with ample space above for the generation of steam. Provided all the condensation is returned to the boiler so that very little make-up water is required, the sectional boiler offers the best advantages for the small installation; but when the condensation is unavoidably wasted, a wrought-iron tubular boiler should be used, the type depending upon the pressure required.

The design of the piping in the boiler room is a most important item, because the whole system may be ineffective through "priming" taking place. When this happens, there is danger of the boilers fracturing owing to the water suddenly leaving the boiler. By correct design of the piping and connections to the boilers, this danger can be reduced to an absolute minimum. A typical lay-out of boiler connections for a medium-sized vapour system is shown in Fig. 1; it will be noted that great attention has been paid to equalizing the pressure between the two boilers and the vapour and condense mains.

No matter what method of heating is adopted, that is hot-water or vapour, the architect should provide for a well-lighted and ventilated boiler room. It too often happens that the provision of a boiler room is forgotten until the last moment, and is then placed in any odd corner of the building; as a consequence it generally develops into a filthy hole, reeking with carbon-mon-oxide. Remember, someone has to work there, and that someone is as human as the architect who designs the building. Apart from the personal element, the apparatus will certainly not receive the attention required if the working conditions are unhealthy and unfavourable.

The boiler house or room must not be built as an afterthought—it should receive as much attention in design as any other portion of the building; it will certainly pay in the end, because from the boiler room is generated the heat which makes the whole building comfortable in cold weather; but comfort cannot be produced from an uncomfortable and unhealthy boiler room.

In factory work the "plenum" system of heating the buildings by hot air is often resorted to. The air is heated by steam or hot water batteries and forced by a fan or fans through ducts to various portions of the rooms. With this system the air must be heated to a high temperature in order to take care of the heat loss through the walls, roof, glass, etc. would be advisable to install this syste in conjunction with radiators so that t heat from the radiators would countera the exposure losses, and the air could th be forced into the building at a norm temperature.

Although heating and ventilating mu essentially be treated separately for pu poses of explanation, they should nev be considered apart in practice. It often stated that the objection to centr heating is the feeling of "stuffiness which is produced in the rooms; th "stuffiness" exists in many instanc cannot be denied, but it is not the fa of the heating system, it is through la of adequate ventilation. An inexpensiv yet effective method of ventilating offi buildings is shown in Fig. 2, where t fresh air enters through hopper ligh and the corridor ceiling is sub-ceiled form an extract duct. At a convenie point the ceiling ducts are connected a vertical shaft to which is attached centrifugal exhaust fan.

In no case should the radiator be plac in front of a fresh-air inlet, because, ap from heating the air to an objectiona degree, the inlets form a dirt trap, and t fresh air passing through is anythi but fresh when it enters the room.

If fresh-air inlets are provided th should be in accessible positions to ena them to be kept clean. A good solut of the problem is shown in Fig. 3, wh wall radiators are placed over the inl and the inlet provided with an adju able baffle.

In conclusion, I should like to impr upon the architect the importance consulting the heating engineer while building plans are in preparation, so t chases and sub-ceilings can be arran and the whole apparatus designed a erected in an efficient manner, with minimum amount of cutting away, a without marring the decorative featu

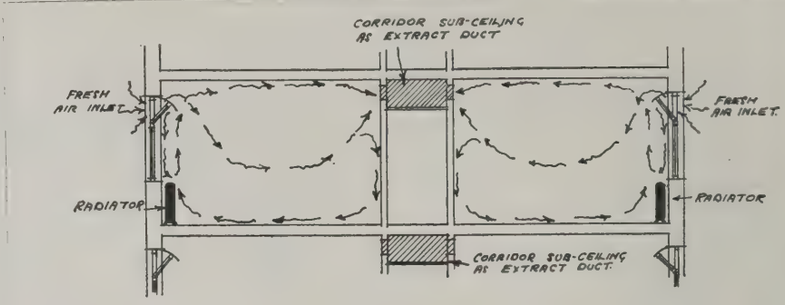


FIG. 2

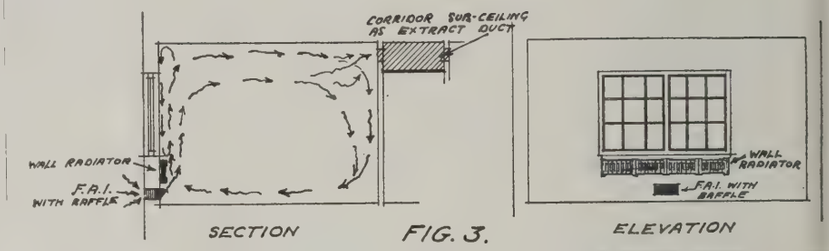


FIG. 3.

AN EFFECTIVE METHOD OF VENTILATING OFFICE BUILDINGS.

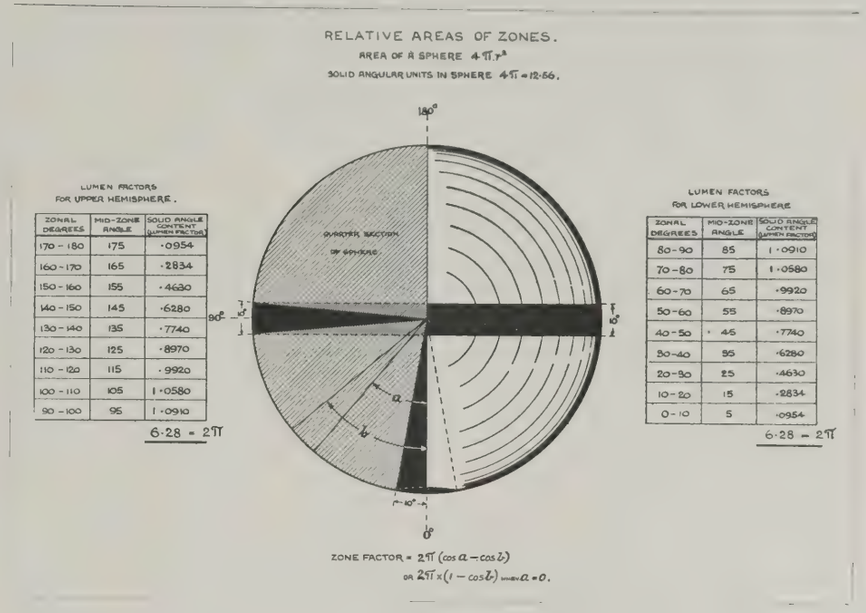
4.—The Lighting of Modern Commercial Buildings: Underlying Principles

By E. STROUD

BEFORE we can intelligently deal with the artificial illumination of building interiors we must understand the underlying principles involved in the calculation of the light flux of lighting equipment as well as the distribution of the rays so that their limitations and advantages may be appreciated to obtain the results and effects necessary in modern commercial or other buildings.

With the latest developments in modern light sources and the great progress in the theory and practice of artificial illumination, vast possibilities are opened for the architectural as well as the purely utilitarian treatment of buildings for artificial lighting.

With a light source we are dealing with a quantitive measure which can be definitely estimated and utilized in a specific manner. The fundamental theory of the subject is based on the study of spherical surfaces; and it is the proper appreciation of this fact which, when grasped, paves the way to a complete understanding and an intelligent use of various lighting equipment and the systems in present-day use.



3.

Candle-power Distribution Curve

The candle-power distribution curve, or, as it is usually called, the photometric curve, is a graphical representation of the candle-power values of a light source when viewed from different angles.

Most light sources give a nearly symmetrical distribution of candle-power in a horizontal plane. For example, a lamp giving 100 horizontal candle-power gives nearly 100 candle-power in all horizontal directions. Similarly, at all angles 15 deg. below the horizontal the candle-power would be approximately the same. On that account it is usually convenient to plot photometric or candle-power curves in a vertical plane, through the axis of the lamp, showing all candle-power values from directly downward (0 deg. or nadia) to directly upward (180 deg. or zenith).

To the trained lighting engineer the photometric curve gives a mental picture of the characteristics of the lighting unit, and it is essential to have such performance curves of a lighting unit before any scheme of illumination can be carried out with any degree of precision.

Two such photometric curves are shown in Figs. 1 and 2. These two distribution curves are of modern gas-filled incandescent electric lamps of 100 watt size and 500 watts respectively. For clearness I have inserted in the curves a diagram of the type of lamps used in the tests.

The candle-power intensities are taken at the various angles in the vertical plane and indicated on the curve by measuring off the different candle-power values radially, to a given scale. These points are then joined together by a continuous line from 0 deg. to 360 deg., making the complete photometric curve as is generally recognized.

High candle-power values between 0 deg. and 30 deg. from the vertical are effective in producing high illumination values on horizontal surfaces. High candle-power values between 30 deg. and 75 deg. from the vertical give high illumination values on vertical surfaces. Between 60 deg. and 90 deg. from the vertical high candle-power values tend to produce glare in interior lighting. Candle-power values between 90 deg. and 180 deg. from the vertical indicate light that will illuminate anything above the level of the unit, for instance, the ceiling.

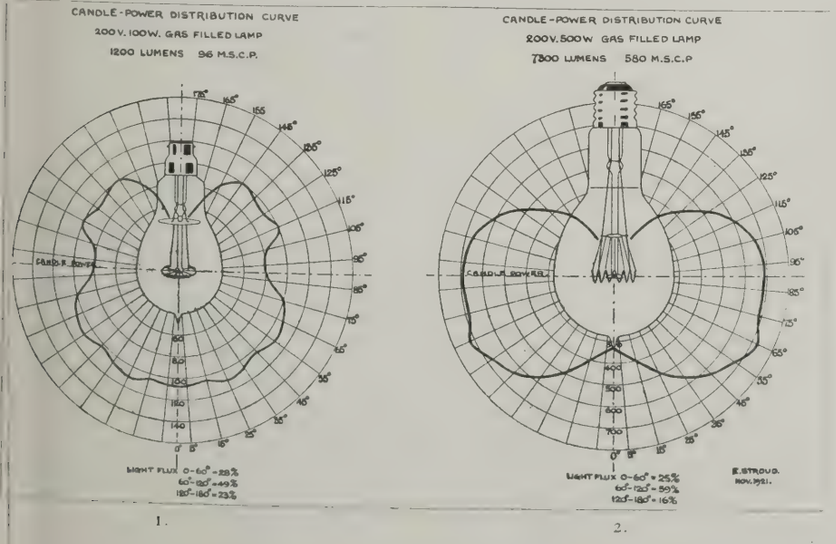
I have given this disposition of the light rays in a general way, but it is my intention to analyse rather closely the bare lamp distribution curves as indicated in Figs. 1 and 2, so as to make clear their actual meaning in lighting problems.

Although the distribution curve is extremely useful in indicating the characteristics of a lighting unit, it must be fully understood that it is not a criterion of the total amount of light emitted by the source. In the third paragraph of this article it is stated that the fundamental theory is based upon the study of spherical surfaces. The photometric curve as plotted shows as of necessity a plane area whereas in reality the measurements are spherical areas, which gives a different meaning to the values at the different angles when considered in terms of quantity or light flux emitted in the particular zones.

In Fig. 3 I have endeavoured to show the relative value of the zones by taking the two extreme 10 deg. zones, 10 deg. from the vertical, and 10 deg. at the horizontal, and by means of the diagrammatical sketch indicating the relative areas.

If one considers a sphere, the area of that sphere is 4π times the radius squared. Assuming the radius is 1, then the area is 12.56 (4π), which equals the solid angular units content.

The solid angular units in any particular zone is found by the equation, 2π (cos. a—cos. b), see Fig. 3, and the quantity of light flux is that zone can be calculated by multiplying the zone factor thus obtained by the average candle-power in the zone.



1. 2.

From a summation of these products for each zone the total value of light flux emitted by the source may be obtained. Referring to Fig. 3, the area covered by the 10 deg. at the horizontal is over eleven times as great as the area covered by the 10 deg. from the vertical.

From the tables it will be seen that the zone factor for—

0—10 degrees = 0·0954
and 80—90 degrees = 1·0910

If these factors are multiplied by the average candle-power in the respective zones the resultant will indicate the quantity of light in Lumens.

Taking Fig. 1 as our example :—

Average candle-power 0—10° = 105·0
105 × 0·0954 = 10 Lumens.
Average candle-power 80—90° = 82·5
82·5 × 1·0910 = 90 Lumens.

Therefore, even though the intensity in the horizontal zone is less, the total quantity of light is much greater than that in the vertical zone. Thus the quantity of light depends not only upon the intensities in the different directions, but upon the areas of the zones which the various intensities illuminate.

The importance of the above calculations in lighting problems is the fact that with all modern bare sources the major portion of the light flux is emitted in an outward direction, therefore does not serve to illuminate the horizontal plane, which is usually the objective, other than by indifferent reflection from walls, owing to their colour values.

Roughly the total light emitted by the bare lamp can be divided in three zones:—

0—60° = 25% of the total light, useful for the direct illumination of the horizontal plane.
60—120° = 50% of the total light emitted in an outward direction.
and 120—180° = 25% of the total light thrown in the upward direction.

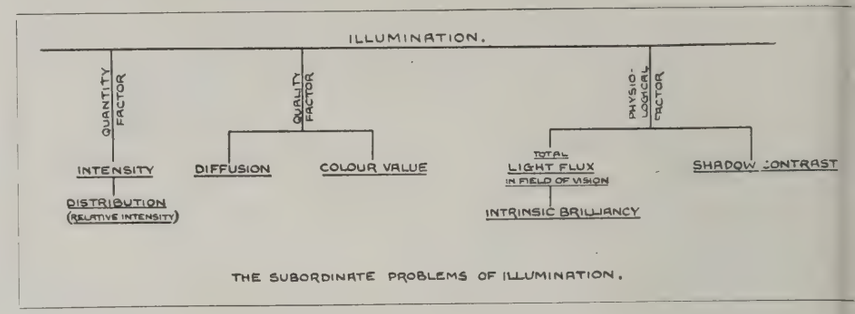
from which it will be gathered that to obtain the maximum efficiency from the bare source it will be necessary to amend the natural distribution so as to get as much as possible of the total light flux restricted to the most advantageous zone for direct lighting, viz., 0—60 deg. from the vertical. Of course, in this instance we are dealing with "direct" lighting, and are assuming that the primary lighting plane is the horizontal, but whichever plane it is required to illuminate, whether the vertical or the ceiling, it is necessary to understand the distribution of the unit so that due care is exercised to obtain the maximum lighting effect or efficiency demanded in any engineering problem.

Principles of Interior Illumination

The object of the preceding paragraphs has been to lead up to the subject of interior lighting. We have discussed at some length the distribution and the calculation of the amount of light available from a source, but there are many other important factors to take into consideration in the design of a correct lighting installation which makes it very difficult in one article to give a comprehensive survey of the subject.

In analysing the subject of lighting Mr. Sweet* arranges the salient features of illumination as shown in Fig. 4, and very properly considers illumination a complex problem, made up of a number of subordinate problems, such as intensity, distribution, diffusion, etc.

* Trans. Illum. Eng. Soc. U.S.A., Vol. iv, p. 745.



THE SUBORDINATE PROBLEMS OF ILLUMINATION.

4.

Referring to Fig 4, we see that intensity and distribution constitute the quantity factors of illumination. The two are close related in the problem of illumination.

The quality factors are the diffusion and colour values of the light. These are independent of each other. The total light flux in the field of vision and shadow contrast are two closely related, yet separate, factors affecting the efficiency of the eye. Closely associated with the subject of total light flux, and at the same time of vital importance, is the factor of intrinsic brightness of the light or light reflecting objects in the field of vision.

With these various factors in mind the question arises as to what constitutes the essentials of a good lighting installation. Following the order given above we may formulate a rule which will apply to all but exceptional cases.

The intensity should be ample to see clearly and distinctly, and the distribution should be such that the illumination over the room will be practically uniform.

The light should be soft and well diffused.

The colour of the light depends upon the class of service and the tastes of the individual.

A light approaching daylight in quality or inclined toward the yellow will in general be found satisfactory.

The sources of light should be placed well above the range of vision and its intrinsic brilliancy reduced by diffusing glassware.

Shadows are necessary for distinguishing outlines, but such shadows should be toned down and not be too abrupt or dense. It is an established fact that bright walls in a room contract the pupil and make a certain factor of illumination less effective than if the walls are dark in colour.

Best results will be obtained if light is on the subject of observation and not on surrounding objects, if those objects are light in colour or have glossy surfaces.

Methods of Illumination

The principal method of arranging units for illuminating a room may be classified as follows :—

Local or specific lighting.
General illumination, and
Combined general and local lighting.

Local Lighting

Localized lighting is the simplest way of applying artificial light. This scheme of lighting is typified by the low candle-power incandescent lamp used and placed under the direct control of the operator. Such a lighting arrangement is capable of illuminating only a small area, and is useful where exceedingly high intensit of illumination is required over a limite area. The cost of wiring a local lightin installation, particularly in a large i stallation, is likely to be high on accou of the large number of units required, an also with maintenance on account of th rough usage to which lamps and r flectors are exposed.

General Illumination

General illumination has been mad possible by the introduction of hig power units. The object of this schem of lighting is to provide an even intensi of illumination throughout a room ind pendent of the arrangement of the furn ture, fixtures, etc. Usually a higher flu of light is required than with the loc lighting, but, on the other hand, th highest efficiency illuminants can employed and the minimum installatio and maintenace expense secured, gene ally resulting in greater economy f places where it is suited. General ill mination is particularly adapted for lar open offices and workrooms where a lar portion of the room requires illuminatio

Combined General and Local Lighting

This term applies to installations whe the general illumination with large un is supplemented by local illuminati with small lighting units. In such i stallations a relatively low general ill mination is distributed throughout t room and a higher intensity of loc illumination is applied where needed.

There are three systems for the p duction of general illumination :

Direct Lighting System

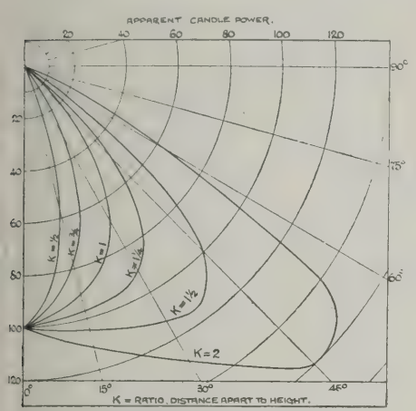
In the earlier part of this article it w shown that with the distribution of t bare source only 25 per cent. of the to light flux is emitted in the 0—60 deg. zo from the vertical, which is all the lig useful in illuminating the horizon plane by direct means, i.e., other than reflection from the surroundings. Su sequently it was stated that one of essentials of good lighting was that distribution should be such that the sulted illumination will be practica uniform.

To obtain this uniformity of illumi tion it will be necessary to study the t of light distribution required in prac to ensure such results.

For the illumination of large inter it is usual to divide the area of the ro into as many rectangular sections as th are lamps required, making the secti as near squares as possible, and plac lighting point over the centre of e section. The size of the squares dep to a great extent upon architectural c

siderations. Having settled the question of spacing the light sources, the next question is the height of suspension above the reference plane which will be determined by the distribution of light from the unit chosen.

Analysing this phase of the subject, Mr. Sweet (ref. cit.) has derived a set of curves, Fig. 5, showing the different distributions necessary to obtain uniform illumination with varying ratios of distance apart of units, to height above the reference plane, $d/h = K = \frac{1}{2}, \frac{3}{4}, 1, 1\frac{1}{4}, 1\frac{1}{2}$, and 2. In other words, for uniform illumination, the maximum distance between the lamps must not be more than $\frac{1}{2}$, $\frac{3}{4}$, etc., of the height of suspension above the reference plane.



CURVES TO GIVE UNIFORM ILLUMINATION (TWO OR MORE UNITS)

5.

Reflectors have been designed to meet the requirements of this class of service. Figs. 6, 7, and 8 show the distribution obtained from the bare lamp equipped with prismatic reflectors of the extensive, intensive, and focussing types.

For these three types of curves the relation of the distance apart between lamp centres to the height above the reference plane for approximately uniform illumination is :—

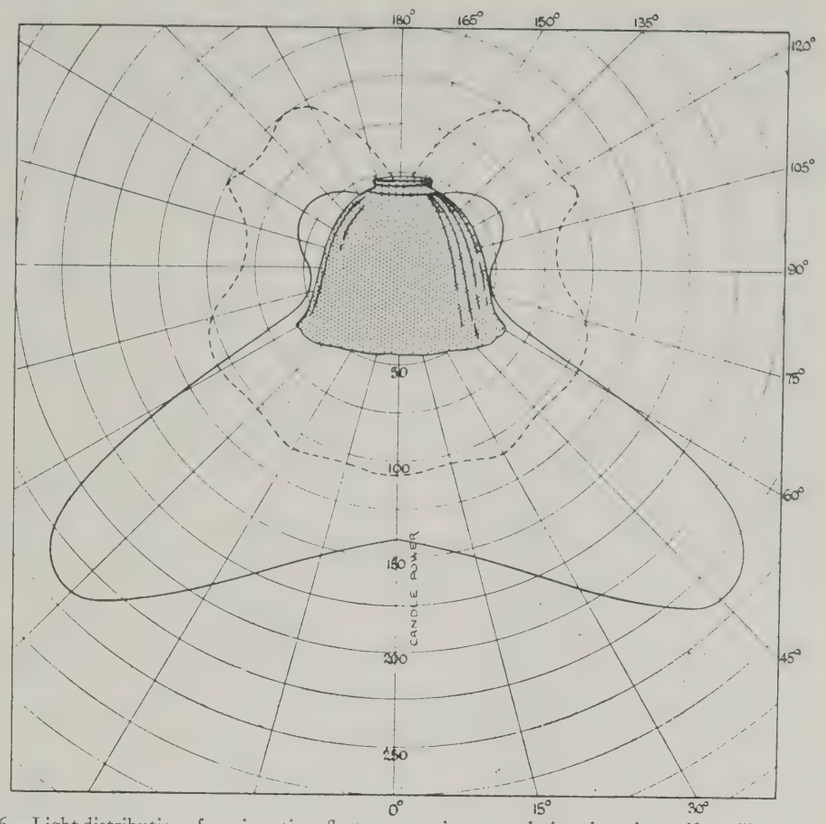
Extensive type curve $K = d/h = 2{\cdot}0$
Intensive type curve $K = d/h = 1{\cdot}5$
Focussing type curve $K = d/h = 1{\cdot}0$

It should not be forgotten that the value of h used in this relationship is the minimum height at which uniform illumination can be secured with the lamps a distance d apart. The lamps can be placed at a greater height than h without impairing the uniformity of illumination, although the intensity of illumination would decrease.

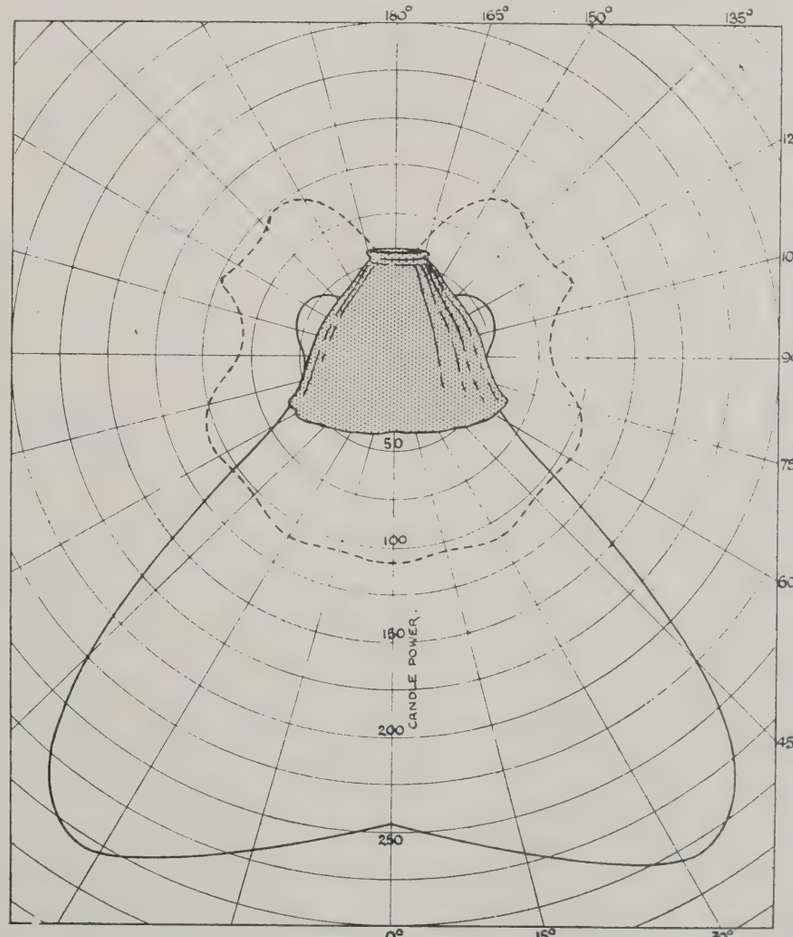
It is obvious that the extensive type of distribution would be used in rooms having low ceiling heights, or where it is desired to light a large area per unit.

The intensive distribution is used for medium and average conditions, and the focussing distribution is used where the units are placed comparatively high above the reference plane.

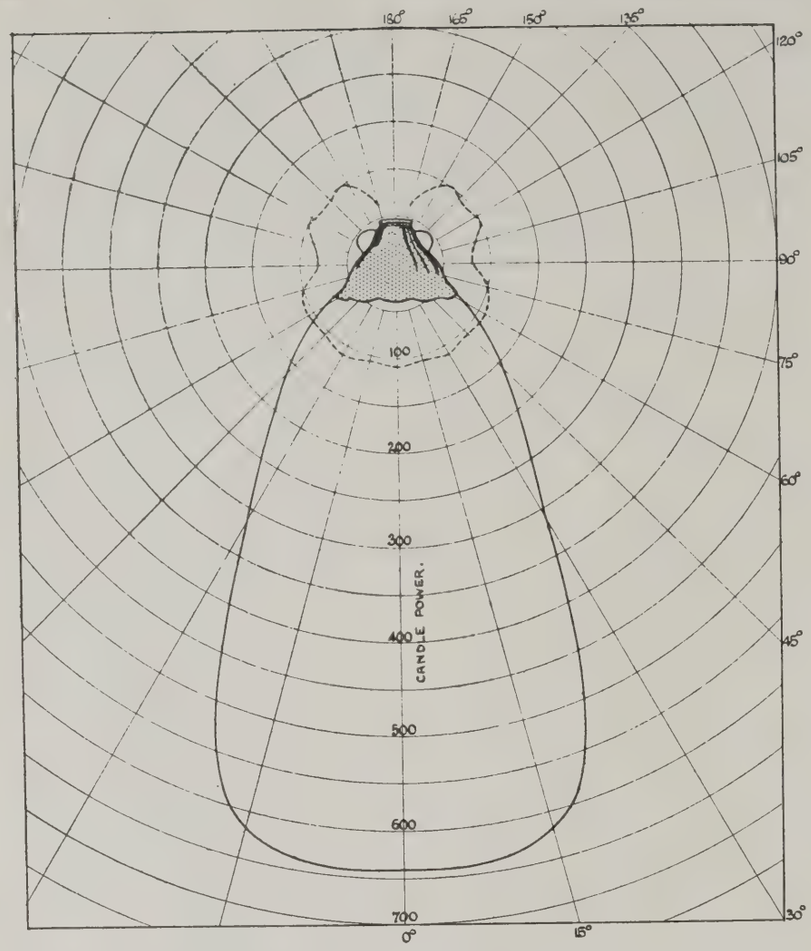
From these curves it will be noticed that the bare lamp distribution has to be modified, insomuch that now over 50 per cent. of the total light flux is re-directed into the 0–60 deg. zone, and is used for the direct illumination of the horizontal plane, the remainder being transmitted through the reflector to allow adequate illumination of the walls and ceilings.



6.—Light distribution of a prismatic reflector, extensive type, designed to give uniform illumination when placed at a distance apart equal to twice the height above the plane to be illuminated.



7.—Light distribution of a prismatic reflector, intensive type, designed to give uniform illumination when placed at a distance apart equal to $1\frac{1}{2}$ times the height above the plane to be illuminated.



8.—Light distribution of a prismatic reflector, focussing type, designed to give uniform illumination when placed at a distance apart equal to the height above the plane to be illuminated.

Semi-Indirect Lighting

The semi-indirect system is a combination of the direct and indirect systems, and is practically a reversal of the conditions as stated above for direct lighting. It may employ some of the translucent reflectors inverted so that the greater part of the light is thrown in an upward direction, while more or less passes directly through the reflectors to the horizontal plane, or translucent reflectors of special design, and possessing artistic and ornamental features, which produce the same results as the inverted reflectors.

These may be of either prismatic or opal glass, alabaster or similar translucent material, but the lighting efficiency will depend upon the reflective efficiency of the material and the light absorption factor of the material used.

Indirect Lighting

The indirect lighting system is ordinarily applied to the practice of projecting the light first on to the ceiling or walls for re-directing to the surfaces to be illuminated; this would include lighting by fittings, which totally conceal the light source by means of an opaque reflector, and also cornice lighting, where the lamps are placed in recesses around the sides of the room, and where fittings or reflectors are not visible.

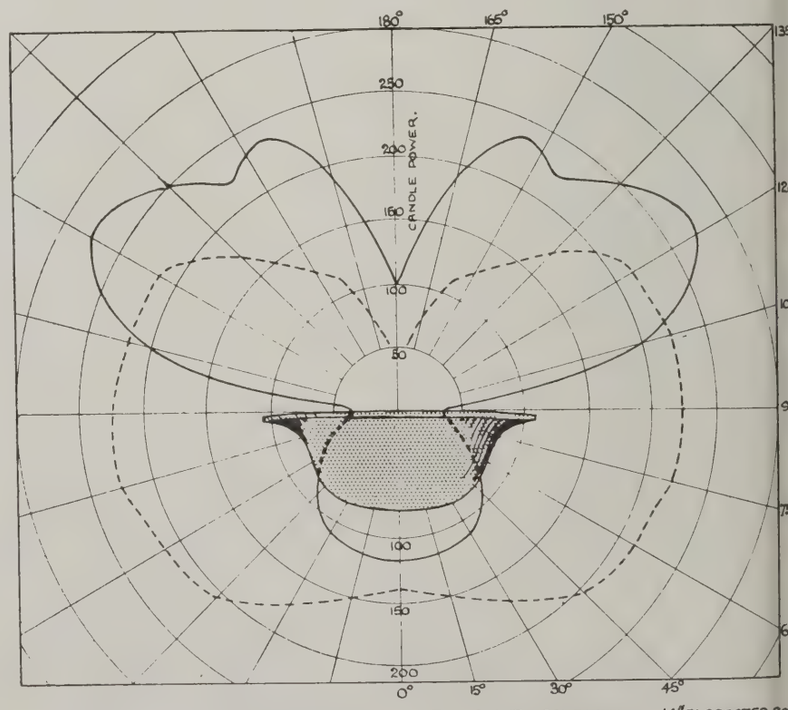
In order to use this system the first essential is a light-coloured ceiling. Pure white is the most efficient reflector, and the nearer white the colour of the ceiling the more efficient it will be as a reflector. For decorative reasons it is often desirable to introduce some tint to change the colour from a pure white. The most efficient tints for this purpose are cream or light pink, reds, browns, blues, and greens are very inefficient. Even light grey, which is a mixture of black and white, is a poor reflector.

Next after the colour of the ceiling comes the question of its surface and contour. For the cornice system an arch or dome-shaped ceiling is preferable. The light from the lamps is then thrown from the cornice on to these concave surfaces, and a better illumination is obtained on the reference plane than if the ceiling be flat.

On account of the diffuse reflection from ceiling and walls it is impossible to control the flux of light very accurately with indirect lighting, and in high, narrow rooms the efficiency must necessarily be lower than in low wide rooms.

The success of an illumination scheme depends not merely on the location and size sources, but equally on the architectural structure of the building, and on the decoration of the walls and ceilings. The decorative effect of artificial lighting often fails because the light falls from a wrong direction on mouldings, friezes, capitals, pillars, etc., or the wrong type of lighting is adopted.

In this article I have only been able to touch briefly on many of the problems in correct artificial lighting, but I hope that sufficient stress has been laid on light distribution of sources to enable lighting problems to be understood from this point of view, and to show that the problem is one that requires active co-operation between the architect and the illuminating engineer.



DOTTED CURVE = BARE 200 V. 200 W. G.F. LAMP.
M.S.C.P. = 200
UPPER HEMISPHERE LUMENS = 1200
LOWER DO. DO = 1300
TOTAL LUMENS, 2500

FULL CURVE = SAME LAMP WITH 14" ALABASTER BOWL
UPPER HEMISPHERE LUMENS = 1290
LOWER DO. DO. 453
TOTAL LUMENS, 1743

E. STROUD NOV 1921

9.

A Model Example of Commercial Architecture : The Kodak Building, Kingsway, London

Sir John Burnet, A.R.A., R.S.A., Architect

The new premises of the Kodak Company, erected in 1911, set up a new standard of commercial architecture in London, and Sir John Burnet is justly credited not only with having evolved an ideal type of office building, but with the far greater achievement of having inaugurated a new movement in architectural design.

The Kodak Building

Prototype of a New Movement in Architecture

FORTH from the midst of much talk of a modern school in architecture a new school appears to be really ıaterializing, not in the shape of an rganization like the Pre-Raphaelite ;rotherhood, but as a new tendency of ıought, developing amongst individuals, nd aiming at the simplification of archi-ːctural forms. The existence of this ıovement is revealed chiefly in the mplified design of factories; but the assic example of it is the Kodak Building ı Kingsway, the design of which, shorn : all unessentials, is based purely upon ıe constructional characteristics of the ıilding.

From a business point of view it is ɔvious that the idea of simplification ɔssesses high virtues, because it implies ːonomy and efficiency, and the ruthless ɛletion of any nonsense of "Art" or Style." Were the question an exclu-vely commercial one, therefore, the ovement would be vindicated at once; ıt the question is not so much whether ıe movement advances a good business ·oposition, as whether its results can be cluded within the meaning of the term ırchitecture."

Architecture, though universally con-ived to mean the art of designing build-gs, differs from the other arts of design that the conditions which govern its oduction are imposed from without ther than self-imposed. In painting, ulpture, and music the form the design to take depends entirely upon the clination of the artist, and has no limita-ɔns beyond those imposed by the ɛdium in which he expresses himself. ıt in architecture the case is different, cause the architect is limited not only his medium—by his bricks and stones but by certain flexible but none the less bstantial external influences, such as e type of building required, the nature the site, the length or brevity of his ent's purse, and the extent of his ilder's perversities. In this respect e problem set the architect resembles ɛ problem a poet sets himself in verse. r the poet, even while obeying the ıitations of language, has to confine ; expression within the conventions of yme or scansion, which, though self-posed, are peremptory when once opted (even in *vers libre*), and exert ıch the same authority over the poet ıt the client's requirements exert over ɛ architect. But curiously enough it is ıctly this limitation which constitutes ɛ triumph of poetry. To the ease with ich the poet moves within his conven-n, to his economic and exquisite ıipulation of phrases, to his nice skill compelling the very laws which fetter n to do his service, making their power strength, is due the sensation of ɔnomy, of wasteless power, and of ımph, which is the essence of poetic m. The architectonic triumph of a ɛm lies in its absolute functional per-tion, its economy and its efficiency. the perfect solution of the problem he ɔ set himself—to invest thought with ɔpropriate form—lies the poet's claim call his creation a work of art. This is true of all the arts, and has been said so many times that it would be ridiculous to repeat it were it not for the fact that what is perceived by every thinking person to be the case in poetry, gets recognition of the most meagre kind in architecture. Yet it is just as obvious that to design a building which satisfies all the requirements of the client, and gives the highest efficiency at the greatest economy; to master the site in such a way as to turn its very peculiarities to profit, and to handle the plan so that its very shortcomings are transformed to virtues; to achieve unity out of complexity, form out of chaos—is to achieve artistic triumph in architecture. The success of the design does not depend upon the insertion of an order, or upon the proportion of the windows, or upon any iteration of motifs; the æsthetic success of the design depends upon the perfect solution of the problem set, its simplicity, practicality, efficiency, and economy.

The modern tendency towards simplification in design and the expression of structure is therefore of the utmost æsthetic significance. It amounts to the re-discovery of an ancient truth, and seems destined to provide the foundation for a new era of architectural activity.

The Kodak Building's position as a pioneer in this movement has made it since its erection in 1911 the focus of many speculations. It has provided a fresh stimulus to architectural thought. All the rubbish of pastiche, of "applied orders," senseless mouldings and extravagant ornament—the mouldering bones of a dead regime—have been flung aside to allow of the free play of functional members, in pursuance of Professor Lethaby's doctrine that the mission of a work of architecture is "*to do its duty*, not to impress." The Kodak Building is a building of service, and expresses its function, and is in that respect beautiful. What is of service, what is of functional value, that only is retained. In this way, though the steel frame of the building is covered by stone-work, the stone reveals the actual position and structure of the girders beneath (as flesh obscures, yet expresses, the structure of the living figure), and does not, as in so many buildings, act as a screen to mask some constructional sleight-of-hand, or perhaps a fault. In another respect, too, the Kodak building is important. In it Sir John Burnet has attacked the great English problem of lighting. He has made it a building of windows, not a building of walls.

H. DE C.

MAIN ENTRANCE TO THE KODAK BUILDING, KINGSWAY. LONDON.
SIR JOHN BURNET, A.R.A., R.S.A., ARCHITECT.

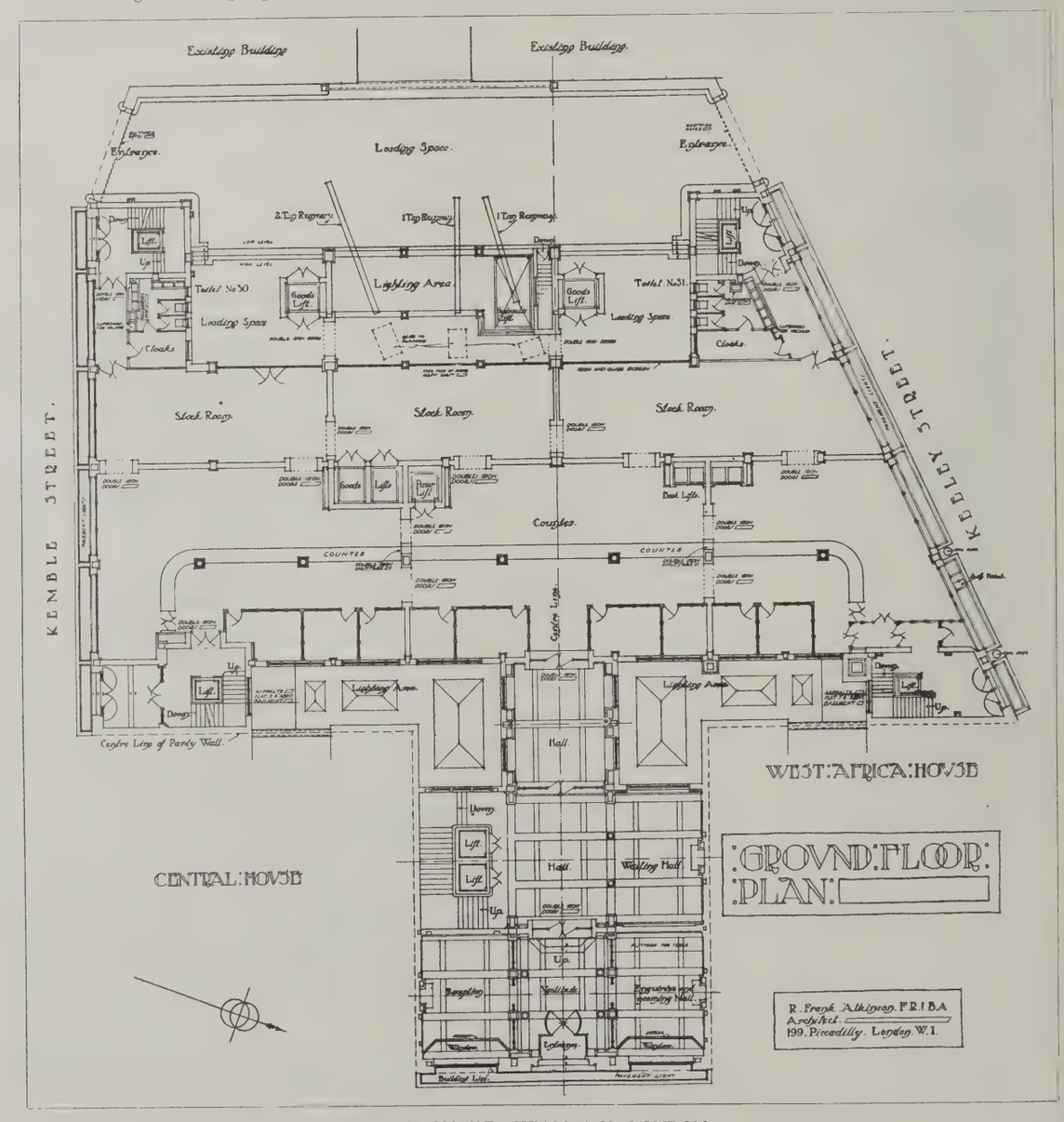
Some Recent Examples of Commercial Architecture

1.—Magnet House, Kingsway

MAGNET HOUSE, the new head office and showrooms of the General Electric Co., Ltd., has been designed, planned, and equipped with a view to obtaining the highest efficiency in the running of a huge business organization. Architecturally, Mr. R. Frank Atkinson, F.R.I.B.A., the architect, has produced a building that is both excellent in conception and harmonious in design. The building, a steel-framed structure, with a Portland stone front, covers a ground area of 25,722 sq. ft. and has eight floors including the basement. Each floor is divided into eight sections by brick walls, fitted with double iron fireproof doors, of which there is a total of 130. The doors are of several types, some consisting of a single panel, and others of three or four panels, with hinged folding sections allowing room for people to pass through without opening the whole door. On the Kingsway front the windows to the ground floor are of bronze and the others of cast iron.

The main entrance hall is of stately proportions, the stone walls and marble floor forming an excellent background for the massive bronze gates and fitments. A wide marble staircase, in the well of which runs two high-speed passenger lifts, leads from the basement, where the showrooms are situated, to the sixth floor, and at each floor opens out to a spacious vestibule. On the left of the vestibule is a handsomely decorated suite of rooms devoted to the exhibition of electric light fittings and domestic electrical appliances.

The various rooms have been laid out with the object of facilitating the selection of fixtures to harmonize with any existing scheme of colour or decoration. The central apartment, which is decorated in Georgian style, contains a display of Georgian and modern fixtures of all types. In the French room, which is tastefully decorated in white and vieux rose, is to be found a selection of Louis XIV and Louis XVI electroliers and brackets, together with French statuettes, bronze figures, and table standards. The Adam section, carried out in tints of Wedgwood green, contains many examples of brackets, pendants, and electroliers in this style. Another period room is arranged as a Jacobean dining-room displaying chandeliers, lanterns, and table candlesticks



MAGNET HOUSE, KINGSWAY, LONDON

MAGNET HOUSE, KINGSWAY, LONDON.
R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.

of Tudor and Jacobean design. On the opposite side of the vestibule is a large industrial showroom.

The greater portion of the ground floor is taken up by the sales counters, which form a continuous line 140 ft. long. Considerable storage accommodation is arranged behind the counters, and the bins can be quickly replenished from the main stockrooms on the upper floors by means of electric service lifts operated by a system of push buttons. The salesmen are in telephonic communication with their departmental stockrooms; and under the counter runs a silent belt conveyor which carries customers' purchases to separate packing benches at one end.

The first and second floors are principally devoted to administrative departments, among which are the spacious counting-house on the first floor, and the board-room and the catalogue and information bureau on the second floor. The offices of the departmental managers and the large departmental general office are also situated on the second floor. In the board-room and the private offices for the management the figured quartered veneer panelling has been constructed out of timber twenty years old.

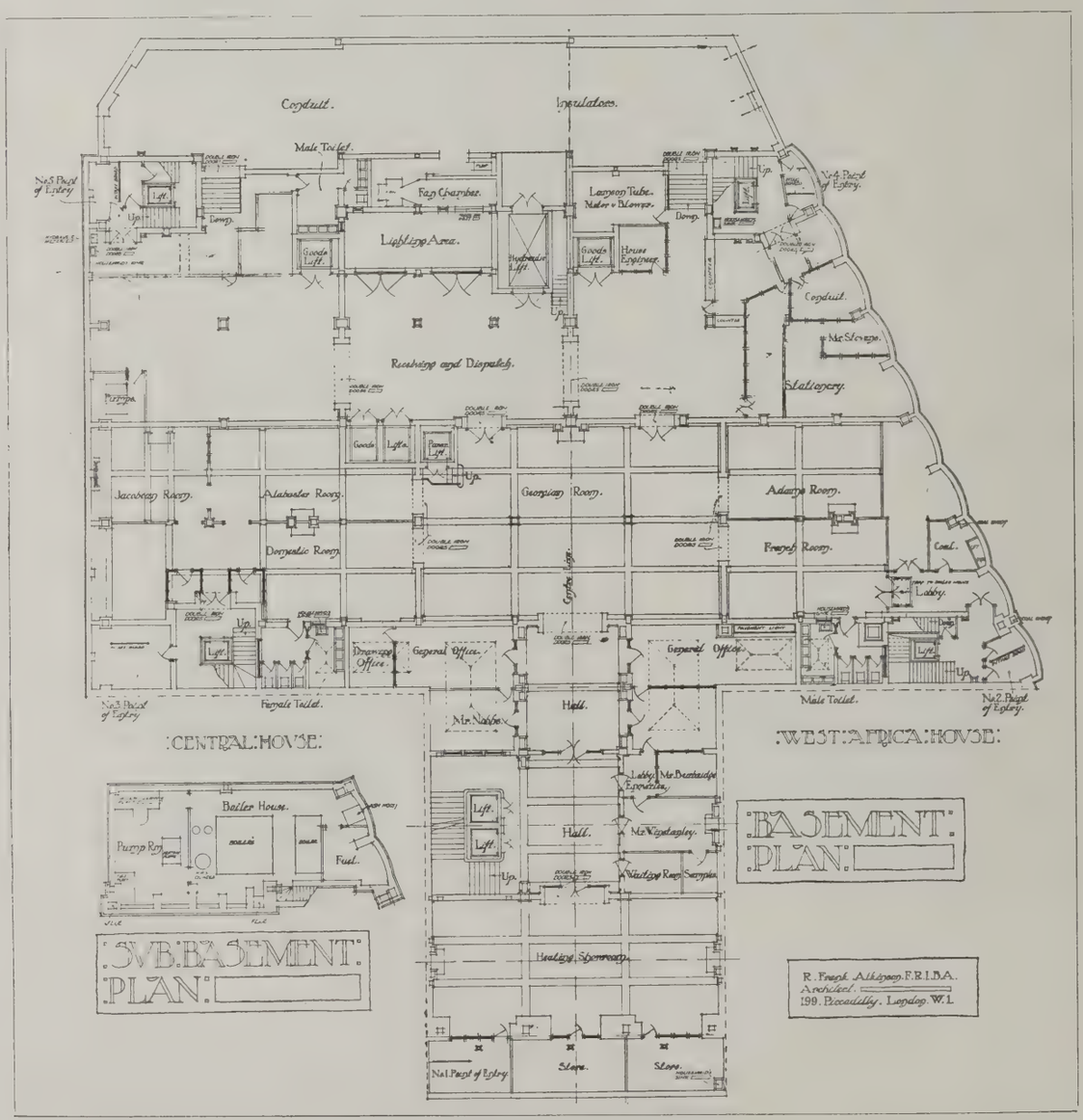
On the third floor is the commodious and well-arranged despatch department, with its rows of bins and packing benches. Adjoining the despatch department is the packing room. Goods are delivered to the despatch department by goods or service lifts, and the completed packages are lowered in special containers by combined cranes and runways into waiting lorries in the van dock below. The stockrooms on the fourth and fifth floors are equipped with some 12,000 steel bins. The private telephone exchange, which has 50 incoming lines and 300 internal extensions, is situated on the fifth floor.

The offices of the illuminating engineering department, a large and well-lighted fixtures design office, and a meter test room and workshop are on the sixth floor. Near by is a large staff canteen fitted with a complete equipment of "Magnet" cooking apparatus, including urns, hot-water calorifiers, and hot-plates. A large lecture hall is also situated on this floor. It has a seating capacity for 350 people, and is used for the social recreation of the staff, as well as for lectures on technical and commercial subjects. There are five staircases giving access to the various floors, which are also served by seven passenger and eight goods lifts.

All inter-departmental correspondence is distributed by means of pneumatic tubes. A central exchange is situated near the entrance hall for dealing with this service, and is also used as a sorting office for incoming mails, letters being afterwards sent to the various departments by the tubes. Ventilation is secured by a network of ducts connected to a modern air-washing plant, and vacuum tubes are also installed for cleaning.

Seven passenger lifts are installed, so distributed that there is a lift at each of the four side entrances, two near the main entrance, and one in the centre of the building. These last three are high-speed lifts, capable of raising 20 cwt. at a maximum speed of 310 ft. per minute, and driven by a 25 b.h.p. electric motor specially manufactured for lift work (as are the motors driving all the other lifts) by the General Electric Co., Ltd.

The two lifts in the entrance hall are shown (p. 57), and it will be noted that the



MAGNET HOUSE, KINGSWAY, LONDON.

MAGNET HOUSE, KINGSWAY, LONDON: DETAIL OF PRINCIPAL ENTRANCE.
R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.

cars, which were specially designed by Mr. R. Frank Atkinson, are in perfect harmony with the handsome decoration of their surroundings. They are made of selected French walnut, full polished, and from the centre carved panels of the domed roofs are suspended suitable bronze electric light fixtures. Governor-controlled safety gears of the very latest type are fitted to these lifts, the clutches operating on the web of the T-section steel guides. In the event of the lift exceeding the maximum designed speed, the speed governor operates a switch which brings the controller to the "off" position, cutting off the power and applying the brakes. If the lift continues to travel at a speed above the normal maximum then a further trip operates the safety gear, which definitely stops the lift within a distance of 2 ft. With this type of safety gear cars travelling at 400 ft. per minute can be brought to rest without causing any inconvenience to passengers, the stopping action being gradual. The other four passenger lifts are intended for the use of the staff, and are of 14 cwt. capacity at a maximum speed of 210 ft. per minute.

A most complete goods handling system has been devised to deal with the large quantity of goods of all descriptions. Carts and lorries loaded with incoming material draw in at the rear of the building and are unloaded by means of three runways spanning the van dock. These lift the loads from the vans, run them into the building, and lower them to the receiving office in the basement. After being unpacked the goods are distributed to the various stockrooms by goods lifts, four of which are installed in the centre of the building. Two of these have a lifting capacity of two tons, the remainder lifting 18 cwt. The cars are massively constructed of heavy hardwood, tongued with iron, in a framework of angle iron sections. Double-leaf landing doors with combined electrical and mechanical door locks are provided on each floor.

From the stockrooms goods are issued either to sales counters or to despatch department for executing orders. Four 1 cwt. service lifts running at a speed of 200 ft. per minute side by side in one well are provided for this purpose. They are controlled by a fully automatic push-button system. A set of buttons, one corresponding to each floor, is fitted for each lift on every landing. On pressing the button corresponding to the floor required, the lift will travel to, and automatically stop at, that floor. Flashlight indicators on the landings indicate the positions of the lifts when nearing any of the levels.

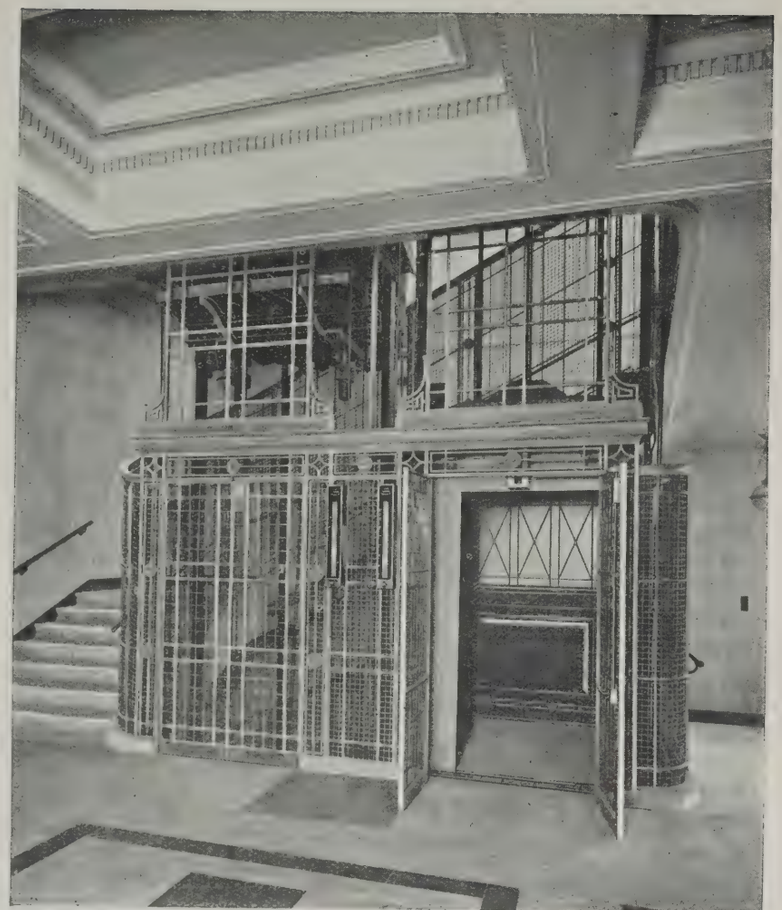
Goods sent away by van or rail are packed in a large packing department on the third floor. They are then lowered to the waiting vans in the van dock below by means of the three runways, which pick up the cases, traverse them along and out over the vans, and then lower them. Two motors are provided for each runway, one of 12 h.p. for lifting, and one of 3 h.p. for traversing. The speed for both motions is 87 ft. per minute, and the load one ton, excepting in the case of one of the runways which is designed to raise two tons. Each runway is operated by an attendant who stands in a cabin from which he has an uninterrupted view of the operations. The traversing motion is controlled by a tramway type controller and the raising and lowering is controlled by three push-buttons marked "Up," "Down," and "Stop." The driving-gears for all the lifts except the runways are situated on the roof in specially built motor rooms. Many different types of drive and control are used.

The general contractors were Messrs. Holloway Bros. (London), Ltd., and the sub-contractors as follows: Val de Travers Asphalt Paving Co., Ltd., London (asphalt lining work), Bath and Portland Stone Firms, Ltd. (Portland stone), H. H. Martyn & Co., Cheltenham (stone carving), Moreland, Hayne & Co., Ltd. (steel work, steel construction, girders), W. B. Simpson and Sons, London (wall, floor, and tiles), Val de Travers Asphalt Co. (roofings), Hy. Hope and Sons, Birmingham (casements and casement fittings), Messrs. Wotton and Sons, Croydon (patent glazing and fittings), Messrs. G. Matthews, Ltd., Cavendish Street, London (stoves, grates, and mantels), Messrs. Davis, Bennett & Co., London (sanitary ware and fittings), Acme Flooring and Paving Co. (1904), Ltd. (flooring, wood block, and parquet), H. T. Jenkins and Son, of Torquay (ditto, marble), Duncan, Watson & Co., London (electric wiring), Turner, Lord & Co., London (stuc work in entrance hall and main staircase), G. Jackson and Sons, London (plaster work), Robert Young Construction Co. (special woodwork and special doors), Bromsgrove Guild (bronze doors, screen, lift enclosure, cast-iron windows, etc., art metal work to special designs), General Electric Co. (electric-light fixtures), Carter, Aynsley, Ltd., London (door furniture and locks), Bromsgrove Guild and Birmingham Guild (gates, railings, handrails, balusters, etc.), Haywards, Ltd., London (folding gates, shutters, etc.), H. T. Jenkins and Son, Torquay (marble work), Express Lift Co., London (lifts and cranes), R. Crittall & Co., London (heating and ventilating apparatus), Duncan, Watson & Co., London (electric bells), G.P.O. (telephones), R. Crittall & Co. (boilers), Milner's Safe Co., Ltd., London (strong-room doors, safes, etc.), R. Crittall & Co. (cooking machinery), Milners, London, and Fraser and Chalmer, Engineering Works, Erith (fireproof curtains and doors), Peel Conner Telephone Works (telephone equipment).

BOARD-ROOM IN THE NEW G.E.C. BUILDING, KINGSWAY, LONDON. R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.

MAGNET HOUSE, KINGSWAY, LONDON: ENTRANCE HALL. R FRANK ATKINSON, F.R.I.B.A., ARCHITECT.

MAGNET HOUSE, KINGSWAY, LONDON: DETAIL OF ENTRANCE HALL.
R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.



High Speed Passenger Lifts.

Service Lifts being loaded.

LIFT INSTALLATIONS AT MAGNET HOUSE, KINGSWAY, LONDON.

2.—The Wolseley Building, Piccadilly

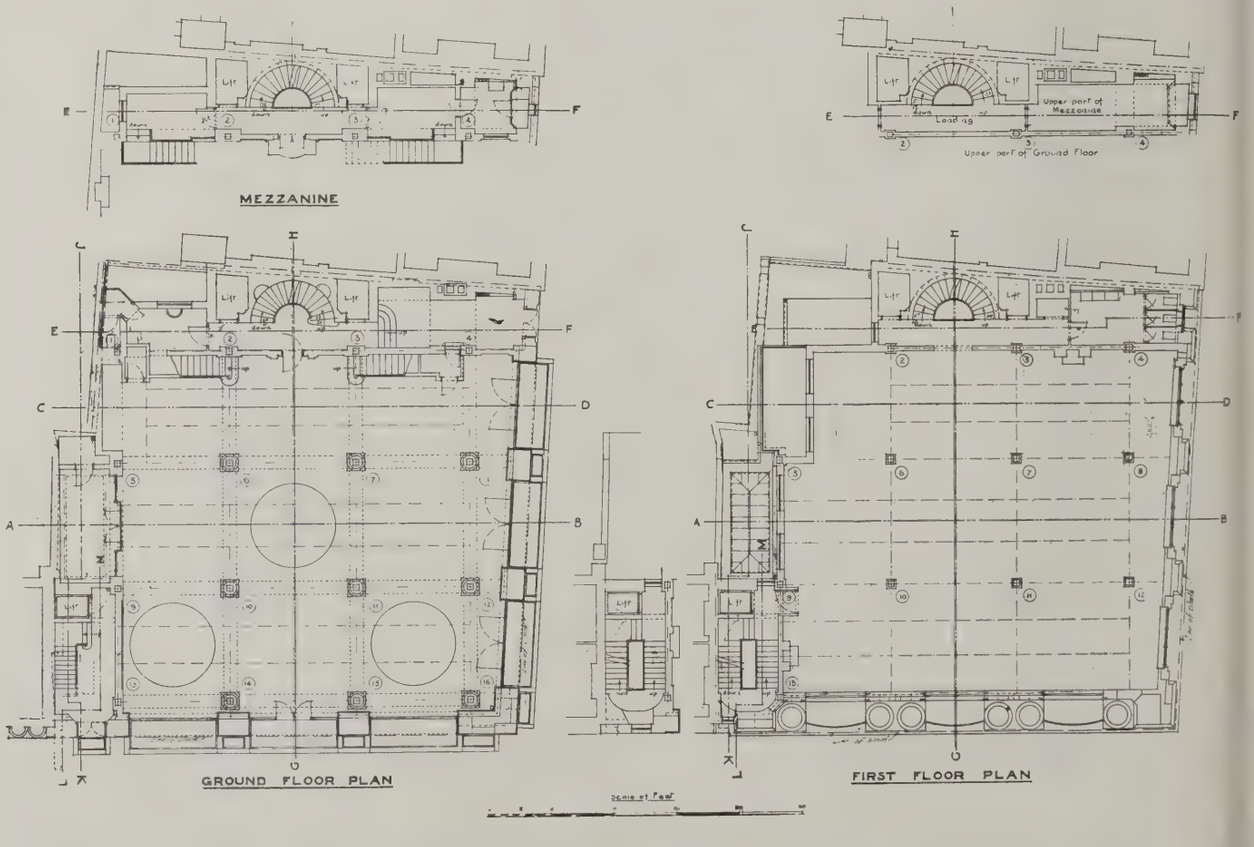
MR. CURTIS GREEN'S new building in Piccadilly is an event in street architecture interesting from so many points of view that it calls for more than casual notice. It stands as evidence of the support which commercial interests may derive from architecture, for when astute men of business take steps to house themselves in a building that shall be essentially a fine work of architecture, it is clear that they regard architecture as a sound commercial proposition; when, further, they leave in the hands of their architect the small details of finishing and equipment they show finer understanding of the matter than perhaps they credit themselves with. Anyone realizes that a strikingly individual building may serve as a profitable trade advertisement, but the man who appreciates the value of a beautiful building as a background, and understands the atmosphere that refinement, proportion, and completeness may create, is in a fair way to be considered as an artist in business. It is not a new thing for architects who take their art very seriously to deal with commercial buildings, but the fact that has come into prominence lately is that the commercial man is now asking for sound and notable architecture as an important part of his assets. We take this point first because it has a bearing on a good deal of work that will be dealt with in the near future, and that in proper hands may go far to redeem our streets from the meanness and vulgarity that mark them.

Looked at as a contribution to the development of street architecture the building is equally notable. It illustrates a very sound study of the use of the classic order in a modern building, and helps to solve some of the problems presented by it. The building is conceived as a single unit, and every detail contributes to the main purpose—indeed, it is very unusual to find a building as large as this consisting of so few parts. It resolves itself into a base, an order, and an attic; nothing could be simpler; it might be considered as the obvious treatment, something that suggested itself and merely required to be drawn, except that buildings do not happen in that way. There are many ways of treating a building, and the genius of the architect shows itself in finding the one that is so obviously right as to appear spontaneous.

The arches that occur on the elevations form the key to the treatment of the interior, where the space is divided into nine squares covered by domes contained between arches running in both directions and carried by big Roman Doric columns, each square serving for the exhibition of one car. The scale is very large; the photographs fail to convey the impression that might have been secured if they had been taken when the place was in use and both cars and people served to indicate the size; but as a matter of fact the spacing of the columns is about 20 ft., and the height is more than 25 ft. It is just a noble showroom, where the cars look their best and where the soundness of the building and the refinement of the detail convey a subtle suggestion of the quality of the wares. The detail of everything inside is delightful; the exposed stone stairs and delicately moulded brass balustrades, in particular, have great value in the general view of the interior; they lead to galleries that are skilfully contrived on either side of the central staircase, and give interest to the whole arrangement. There is a fine bold marble pavement maintaining very well the general scale of the work; and some very telling colour has been secured by the use of Japanese lacquer; the columns are lacquered in plain red with a little gilding in the caps and bases, but the screens and doors and the panels of the niches are fully decorated in gold on a ground of lacquer, either red or black, and the same method has been applied to chairs and tables and to the furniture generally. With a background of stone, and with plain white plastering above, these spots of bright colour count for a great deal in the total effect.

The site of the building is roughly square, but the two inner boundaries of it are very irregular, and the spaces between the boundaries and the square which constitutes the showroom are filled up with closely planned staircases, lobbies, and lavatories, with open areas for light and ventilation. In the upper stories the floors are left as great open spaces to be partitioned to suit the requirements of the occupiers.

All the metal-work details are interesting. There are great wrought-iron



THE WOLSELEY BUILDING, PICCADILLY: PLANS. W. CURTIS GREEN. F.R.I.B.A., ARCHITECT.

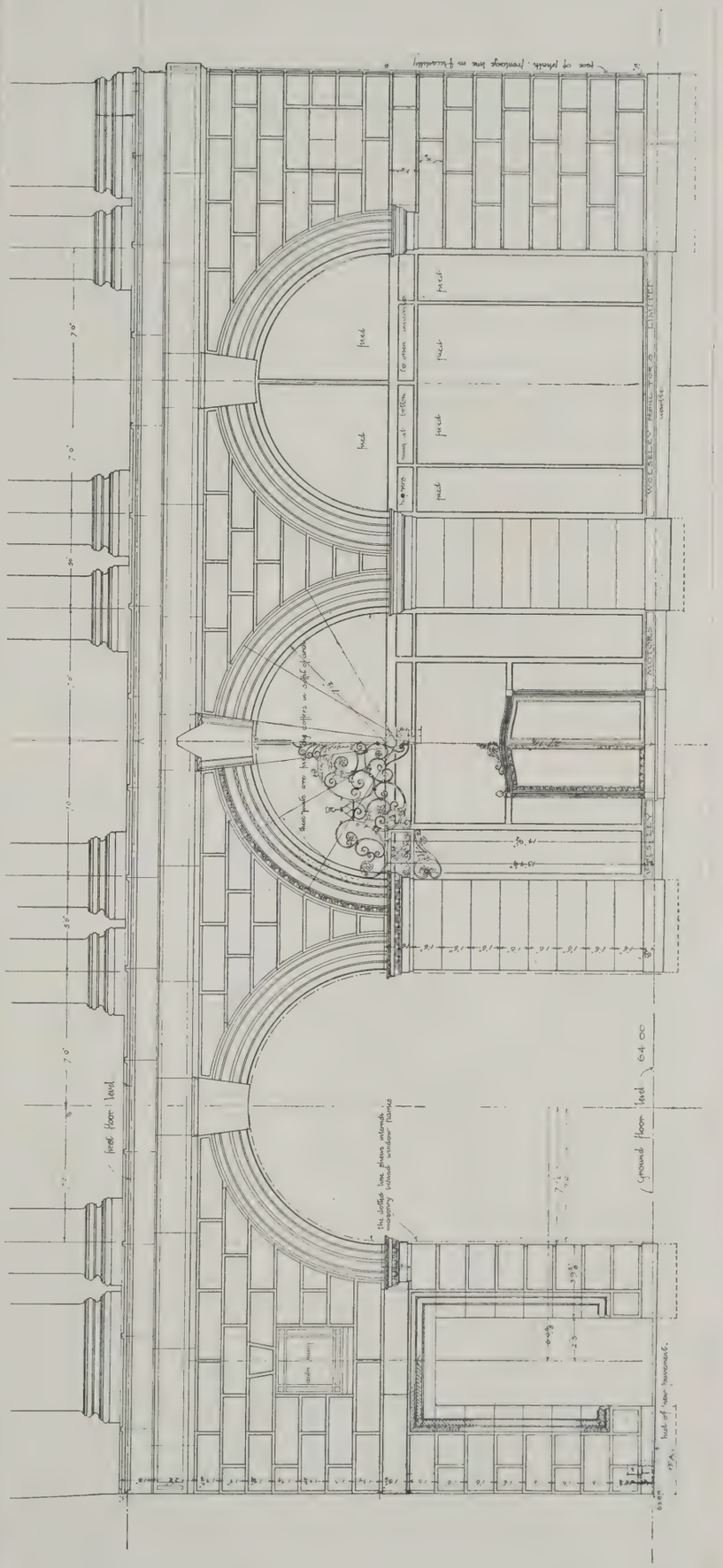
llings in the arches of the windows, well esigned and very effective, and electric-ght pendants that have received very areful attention. Cast-iron panels are sed to form the fillings between the xternal columns in a way that is now enerally accepted and is probably the est solution of a difficulty, but they have een left so severely plain that they are little obtrusive. One cannot doubt that ne matter was well considered; but a ttle detail, to give texture to the sur-ces, would have been acceptable.

Altogether the building is a fine pro-uction and one that is fully worthy of s position. How far it may have an nfluence on future developments re-nains to be seen. The conditions and equirements that it is designed to meet re unusual, but not especially so. imilar conditions may easily occur in ther buildings such as banks and in-rance offices; but the fact remains that, peaking broadly, architecture such as nis is out of scale with average modern equirements. We seem to be committed o the classic tradition, and so far we have ot succeeded in adapting it very success-lly to the circumstances of modern life. he stucco classic of a hundred years ago ad qualities that are never sufficiently cknowledged, but it depended for its ccess in very large measure on the beau-ful proportion rendered possible by the wness of the buildings and on the sim-licity of the planning. The building of o-day is tall, it is complex, it is so costly at every foot of space taken from a floor nd given to a wall is a loss of income; it conditioned by exacting requirements nd exasperating limitations, and we must ldly acknowledge that at present we ave not found our way to the expression nat is at one and the same time efficient, eautiful, and honest. If time serves, a olution of the matter is sure to be found; at history travels far and fast in these ays, and the conditions may develop too pidly for us. In any case a successful ilding such as this one interjected here nd there among the mediocre ones—to ve them no worse an appellation—is neering and uplifting, and is evidence of ne possibilities that wait for us when ppreciation of things beautiful is more neral and when the influence of en-ronment on character is better under-ood.

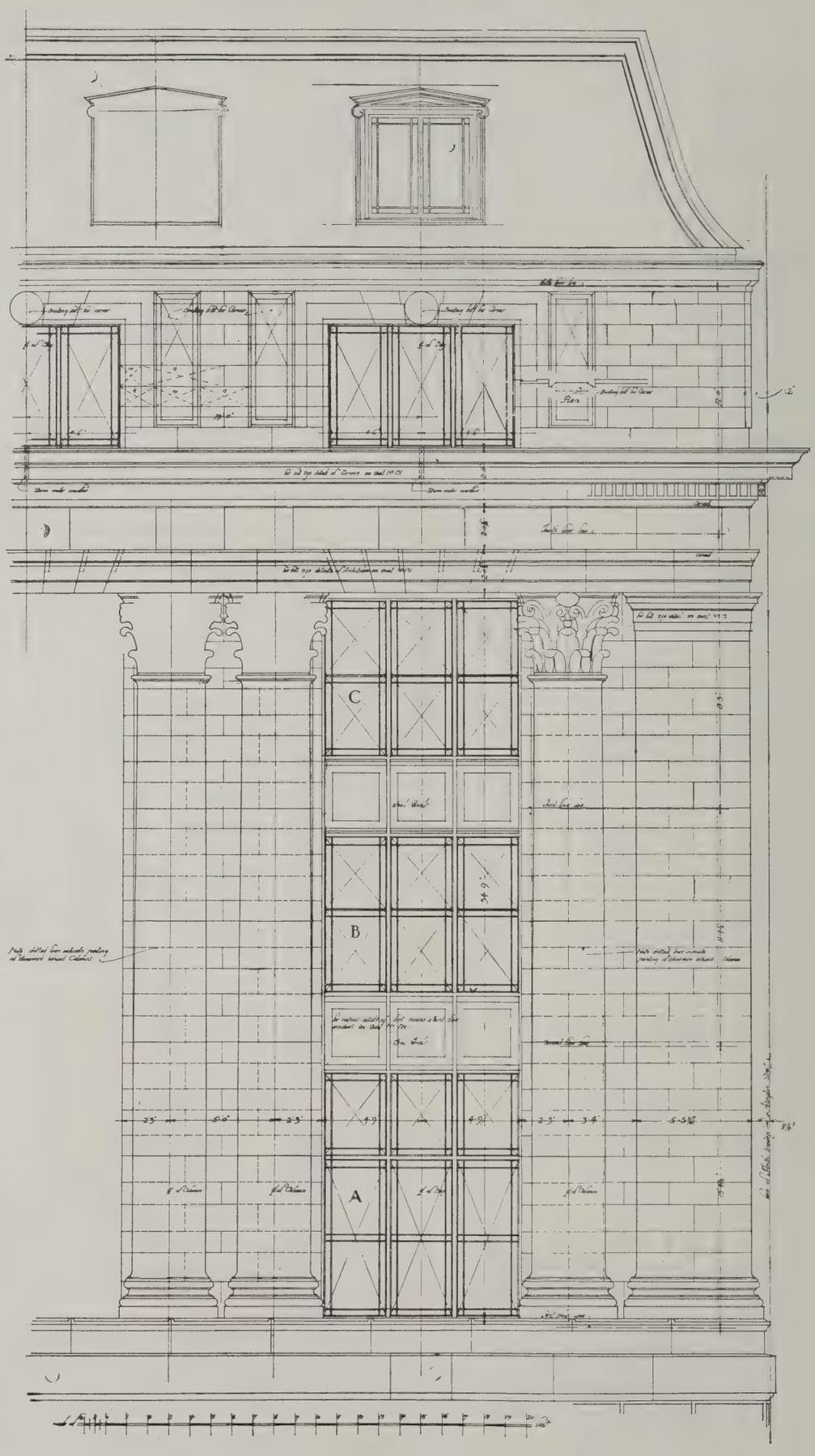
The executive difficulties of city build-g are so great and occupy so much of n architect's time and attention that to aintain the sense of freshness and tality throughout a large important ilding is an achievement not to be ghtly estimated, and the architect of the olseley Building is to be congratulated n his success.

A. K.

Messrs. Holland and Hannen and nbitts were the general contractors. The her contractors associated with the rk were Redpath, Brown & Co., Ltd. eel construction), Kleine Co. (fireproof ors), J. Jeffreys & Co. (lighting and ntilating), Smith, Major and Stevens d., Northampton (lifts), Burke & Co. arble work), F. Geere Howard (electric hting and lacquer decoration), Bir-ngham Guild, Ltd. (wrought-iron grilles), W. Singer and Sons, Ltd., Frome aircase balustrades), Henry Hope and ns, Ltd., Smethwick (steel casements), rcourts, Ltd., Birmingham (bronze ctric-light fittings).



THE WOLSELEY BUILDING, LONDON: DETAIL OF GROUND FLOOR, PICCADILLY FRONT. W. CURTIS GREEN, F.R.I.B.A., ARCHITECT.



THE WOLSELEY BUILDING: DETAIL OF UPPER FLOORS, PICCADILLY FRONT.
W. CURTIS GREEN, F.R.I.B.A., ARCHITECT

THE WOLSELEY BUILDING: VIEWS IN SHOWROOM.

THE WOLSELEY BUILDING, PICCADILLY, LONDON: GENERAL VIEW OF SHOWROOM.
W. CURTIS GREEN, F.R.I.B.A., ARCHITECT.

3.—New Shipping Offices in the City

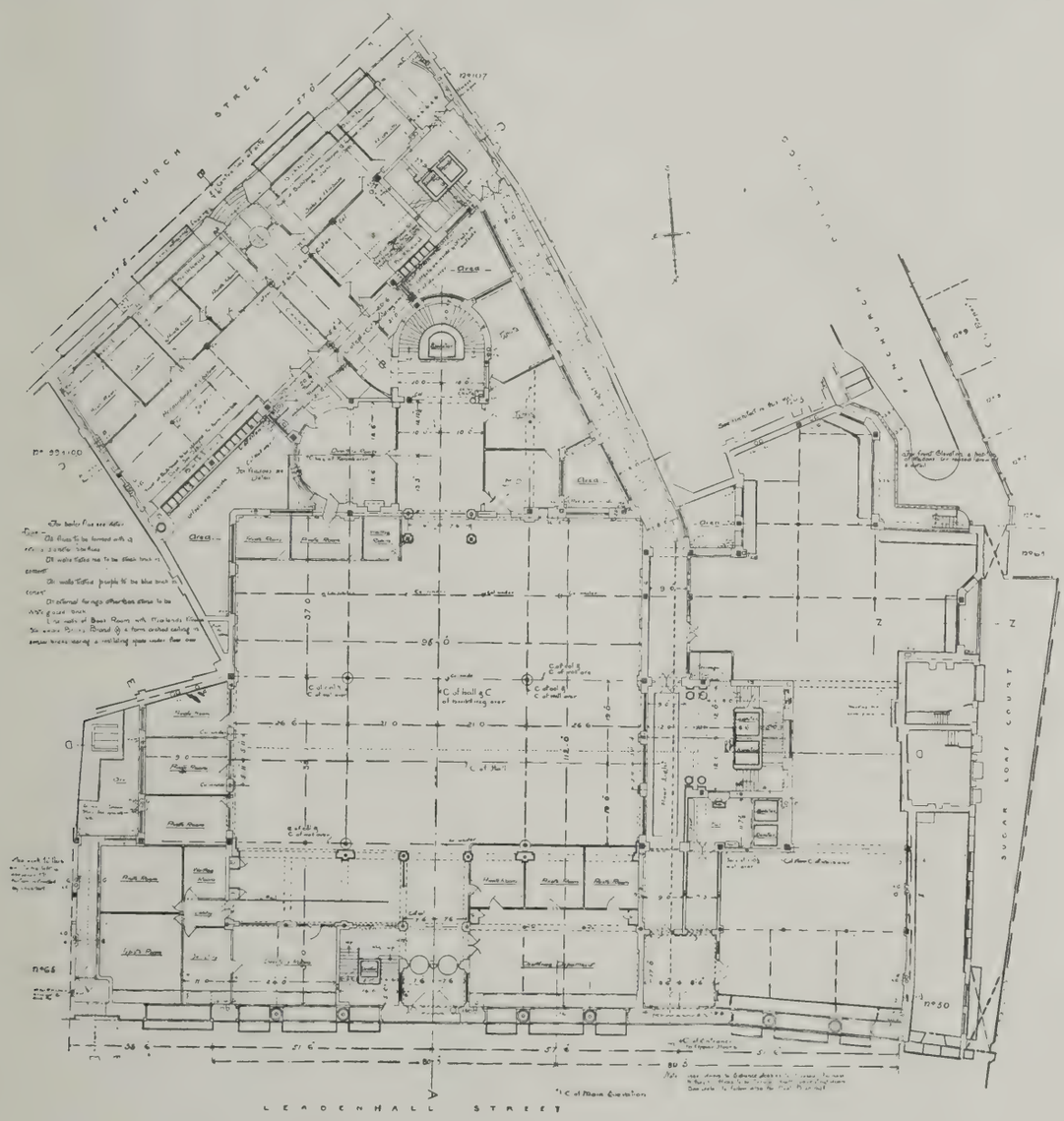
THE new Furness Withy Building, with its extensive site and huge proportions, marks a distinct era in the development of City office buildings. It is destined to form part of a comprehensive scheme for the centralization of the business world of shipping, which will eventually be contained in the comparatively small space between the Baltic and the new Port of London Authority Building in Trinity Square. The P. & O. have already established themselves in the neighbourhood, and a variety of shipping firms, not to speak of their younger brethren of the air, are about to take possession of the magnificent headquarters now nearing completion.

The building is extraordinarily self-contained, and constitutes in many ways a little world of its own. It has its own artesian wells, its own air and water purifying apparatus, its own heating machinery, its own telephone installation, and also its own vacuum-cleaning plant. Covering a site of three-quarters of an acre, the structure, with its two imposing façades of Portland stone, rises to a height of ten stories, with a total floor space of about seven acres.

The main feature of the ground floor is the great galleried shipping hall, with its walls of Sicilian marble, decorated plaster ceiling and mouldings, and marble and wood-block floor. Mahogany counters and fittings complete the equipment. Natural lighting is afforded by three domical top lights, and large windows. In addition, artificial light is secured by means of numerous specially designed electric fittings. The hall is surrounded by offices, repeated on the gallery floor above. On the Fenchurch Street side are the official rooms of Messrs. Furness Withy, including a panelled board-room, chairman's and directors' rooms. The upper floors are entirely given up to offices, some of very fine proportions, and all beautifully lighted and elaborately equipped.

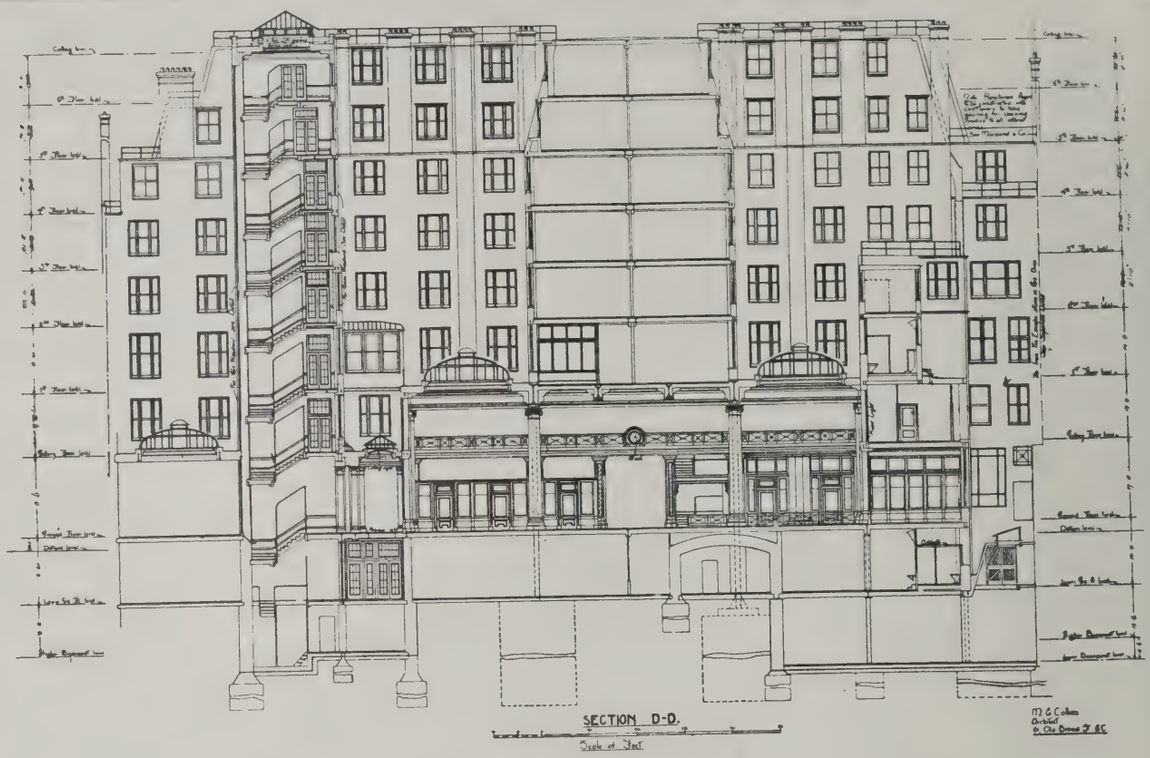
The building is provided with nine lifts, and the staircase walls, pavings, and steps are all of marble.

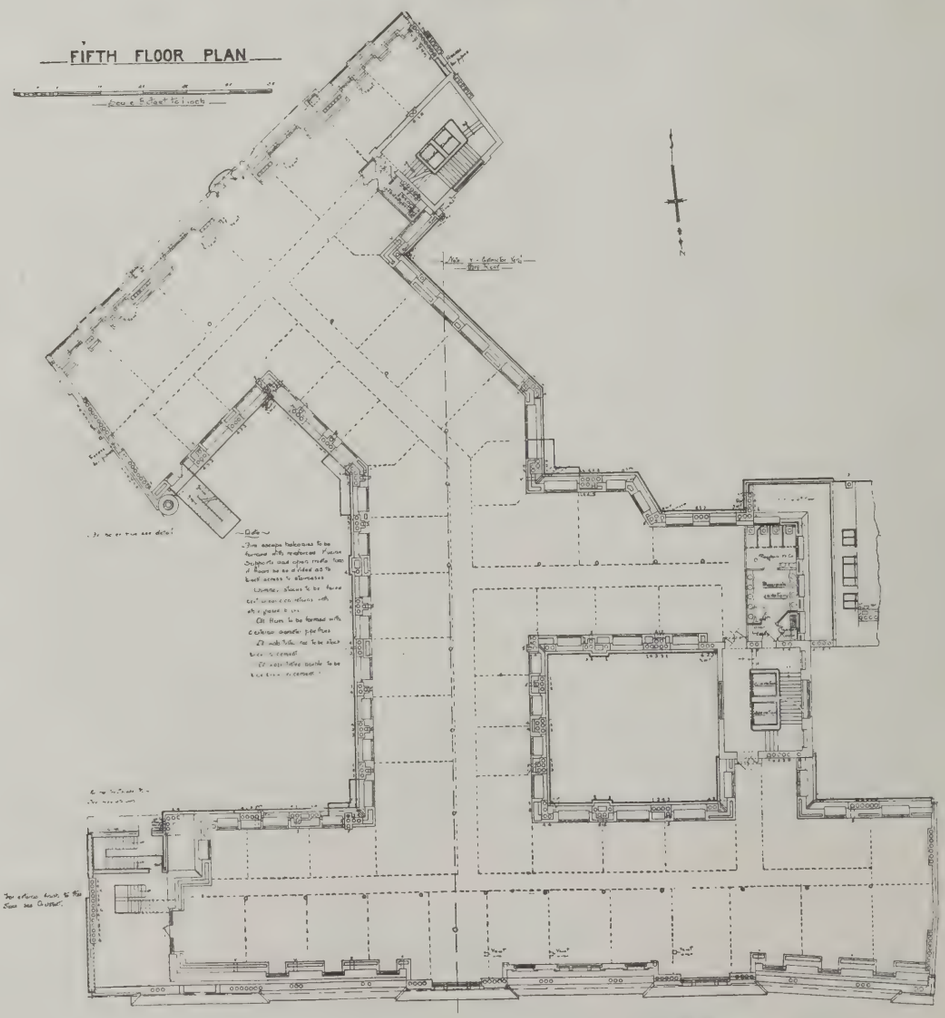
A special feature has been made of the sanitary installation, which has received great attention, and is in every way up to the most modern ideas. Special fittings have in many cases been made to fit between walls and around corners and angles in order to avoid stanchions and similar obstructions. Water fittings called for considerable forethought, owing to the nature of the deep well water with which the building is supplied.



GROUND FLOOR PLAN.

NEW OFFICES FOR FURNESS WITHY & CO., LTD., LEADENHALL STREET, LONDON.
M. E. COLLINS, F.R.I.B.A., ARCHITECT.





NEW OFFICES FOR FURNESS WITHY & CO., LTD., LEADENHALL STREET, LONDON. M. E. COLLINS, F.R.I.B.A., ARCHITECT.

NEW OFFICES FOR FURNESS WITHY & CO., LTD.
FACADES TO LEADENHALL STREET AND FENCHURCH STREET.
M. E. COLLINS, F.R.I.B.A., ARCHITECT.

AN OFFICE IN THE FURNESS WITHY BUILDING.
M. E. COLLINS, F.R.I.B.A., ARCHITECT.

Messrs. Trollope and Colls were the general contractors for the work, and the carved stone work was executed by Mr. John Hawkings. Other contracts were executed by Val de Travers Asphalt Co., Ltd. (asphalt), E. J. and A. T. Bradford (wood carving), W. F. Stanley & Co. (glazed bricks), the Portland Stone Firms (stone), Moreland, Hayne & Co. (steelwork), Kleine Co. (fireproof floors), Bellman, Ivey and Carter (scagliola), Crittall Manufacturing Co. (casements), Luxfer Prism Co. (patent glazing), George Wright & Co. (stoves), Davis Bennett & Co. (plumbing), Mellowes & Co., Ltd. (sanitary fittings), Acme Flooring and Paving Co. (wood-block flooring), Fenning & Co., Ltd., and Art Pavements and Decorations, Ltd. (marble work, including mosaic flooring), Pinching and Walton (electric wiring), George Jackson and Sons and P. Turpin (plasterwork), T. B. Colman and Sons (special doors), W. T. Allen & Co. and the Metropolitan Metal Construction Co., Ltd. (Art metal work), Hobbs, Hart & Co., Ltd., and Carter and Aynsley, Ltd. (door furniture and locks), Waygood-Otis, Ltd. (lifts), Ozonair, Ltd. (ventilating machinery), the Chatwood Safe Co. (strong-room doors), Standard Time Co. and Negretti and Zambra (clocks), Bath Artcraft Co. (special furnishings), Alfred Williams & Co. (wells), Robert Adams (bronze ventilating window gearing), G. N. Haden and Sons (heating and ventilating), Sturtevant Co. (vacuum cleaning plant).

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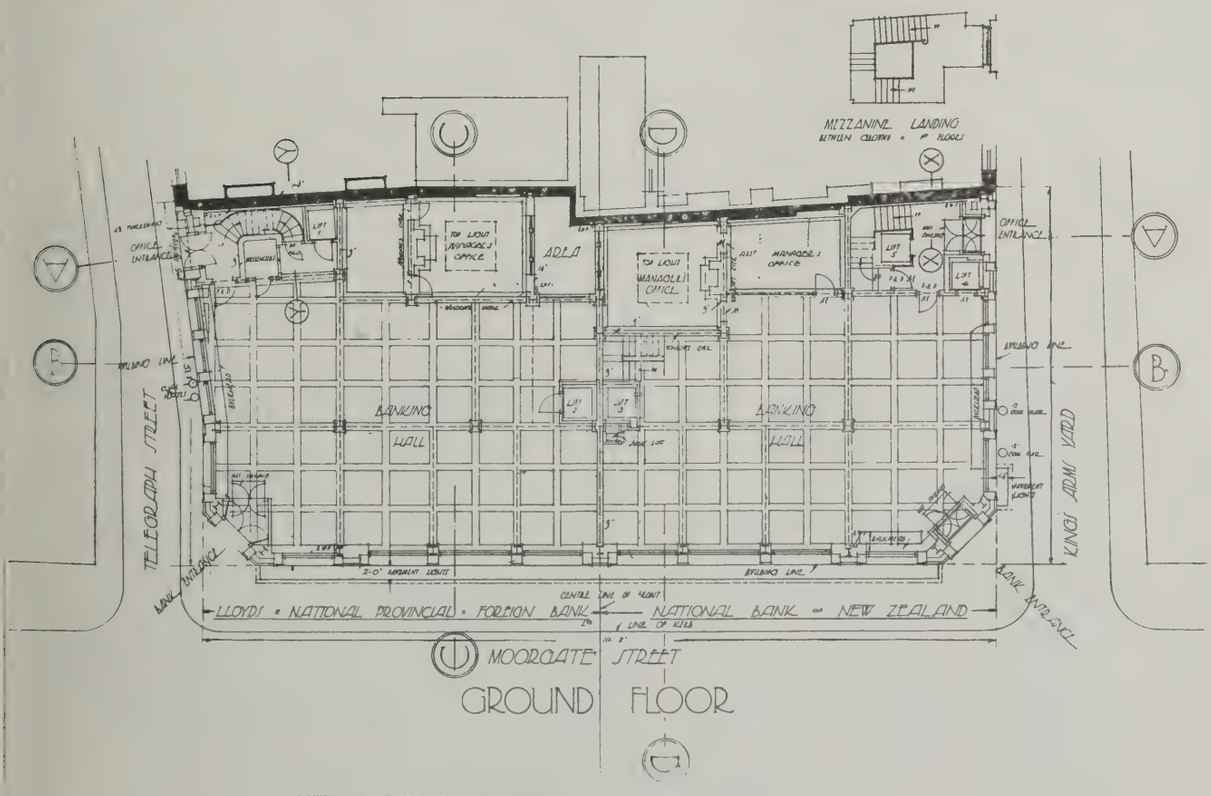
4.—New City Banking Premises

The last stages are being reached in the transformation of the buildings in Moorgate Street. In this reconstruction work, which has been going on for several years, the City of London Real Property Co. has figured, not inconspicuously, by the erection, from the designs (page 67) of Messrs. Henry Tanner, architects, of the fine block of buildings, Nos. 6–10, now approaching completion on the east side. The building, a bold treatment of Portland stone on a base of Norwegian granite, will be used as bank premises and offices. The structure is steel-framed, and built on a reinforced concrete raft. The south block, which is to be the new home of the National Bank of New Zealand, Ltd., is arranged with its banking ha approached by an angle entrance, feature being the Calacata marble interic with an enriched and heavily coffere ceiling in fibrous plaster. The sashes a of bronze, and the floor will be laid i grey rubber. Three electric passeng lifts, fitted with push-button contro will serve this portion of the buildin The fittings and furniture throughout t banking hall, principal's offices, and t reception and board rooms on the fir floor, are in polished walnut, the electri light fittings being in bronze.

The general contractors were Messr Trollope and Colls, Ltd., the sub-co tractors being as follows : J. A. Stevens (sculpture work), Bath and Portlan Stone Firms, Ltd. (stone generally Fenning & Co., Ltd. (granite), Power an Deane, Ransomes, Ltd. (steelwork Henry Hope and Son, Ltd. (casements British Luxfer Prism Synd., Ltd. (lante lights), Wotton and Sons (fire-resistir glazing), Davis Bennett & Co., Lt (sanitary ware), The North British Ru ber Co., Ltd. (rubber flooring), Higgi and Griffiths and Leo. Sunderland & C Ltd. (electric wiring), Trollope and Coll Ltd. (special woodwork panelling Higgins and Griffiths (electric-light fi tures), Carter and Aynsley, Ltd. (do furniture, locks, etc.), Waygood-Ot Ltd., and Medway Safety Lift Co., Lt (lifts and gates), James Gray, Ltd. (hea ing and ventilation), Milners Safe C (strong-room doors, safes, etc.), A Pavements and Decorations, Ltd. (tile wa linings), Fenning & Co., Ltd. (marble work

THE FURNESS WITHY BUILDING: AN ENTRANCE HALL.
M. E. COLLINS, F.R.I.B.A., ARCHITECT.



NEW BANKING PREMISES, MOORGATE STREET, LONDON.
MESSRS. HENRY TANNER, FF.R.I.B.A., ARCHITECTS.
(*See page 66*).

5.—New Premises for Messrs. Lilley and Skinner

VIEW IN FITTING ROOM

THIS building has been designed by Mr. Arthur Sykes, F.R.I.B.A., to conform with the work of Robert Adam in the adjoining Stratford Place, some part of which had to be demolished to make room for the more commodious premises required by Messrs. Lilley and Skinner. The premises consist of a steel frame building roofed with Westmorland slates, and front walls of brickwork. The deliciously mellowed appearance of the original structure is skilfully retained by the use of a particular facing brick—purple stocks from Sussex. Dressings are of Portland stone, and the lower part of the elevation is vermiculated.

The recessed entrance is particularly delightful, and commercial uses are served by the erection of independent show cases, which, additional to the spacious bronze shop front, give liberal opportunities for the display of wares.

The shop windows contrive in some subtle way to melt into the general harmony of the elevation, and the watchman's box, surmounted with its lion couchant, once a feature of the corner, is preserved. Mr. Arthur Sykes, the architect of the building, has indeed achieve a marvel, providing for his clients a ver perfect shoe shop, while re-creating wit reverential care one of our priceless fra ments of old London.

Basement, ground floor, and first floo are occupied by the various departmen of the shop, and above are offices. Th interior fittings are of light-coloure mahogany, and the showrooms ar equipped with admirable wall fittin for the accommodation of stock. Thos whose eyes must often have been offende by unseemly arrays of cardboard boxe will appreciate this marked advance i the æsthetics of shoe-buying.

The actual erection of the buildin was not without excitement. An ancien watercourse was known to cross the sit but its exact location was uncharted, an it was only when the main stanchion destined to carry tremendous weight, wa being put in that an 8 ft. culvert wa discovered precisely beneath it. Henc arose the necessity for a very pretty piece of bridge work.

Messrs. George Bollom & Co. were th general contractors, and others includ Messrs. The Nine Elms Stone Co. (Port land stone); Messrs. Godfrey Gallard & Co. (carved stonework); Messrs. Drew Bear Perks & Co. (steelwork); Messrs Mellowes & Co. (patent glazing and fit ting); Messrs. John Bolding and Sons an Messrs. H. Pontifex and Sons (plumbin and sanitary work); Messrs. W. A. Hol (electric wiring); Messrs. H. E. Gaze, Ltd (plasterwork); Messrs. Art Pavement and Decorations, Ltd. (mosaic shop front); Messrs. S. Haskins and Bros (art metalwork;) Messrs. Coules and So (electric light fixtures); Messrs. Waygood Otis, Ltd. (lifts); Messrs. Wontner-Smith Gray & Co. (heating and ventilating) Messrs. The British Luxfer Prism Syndi cate, Ltd. (fire-resisting glazing).

NEW PREMISES FOR MESSRS. LILLEY AND SKINNER, LTD., OXFORD STREET, LONDON.
ARTHUR SYKES, F.R.I.B.A., ARCHITECT.

Some Other Important Buildings of the Year

1.—New Public Halls, Blackburn

THE New Public Halls at Blackburn mark the completion of a most ambitious town improvement scheme. Initiated over twenty-two years ago, the complete scheme, together with the new electric power-station, has involved an expenditure of over a million and a quarter of money. The foundation stone of the public halls was laid by the King in 1913, but the work was held up during the war. The two smaller halls, known as the Assembly Hall and the Lecture Hall, were completed during the war, and these, with the ancillary rooms, were used as a Red Cross hospital. On the conclusion of peace the work on the Public Halls was at once resumed.

Designed in the late Renaissance style, the whole of the work is executed in stone from the Butler Delph Quarries, with the exception of the sculpture and the fluted shafts of the columns and caps, which are executed in Darley Dale stone. The buildings have been connected with those of the Sessions House by a colonnade, the whole thus presenting an unbroken front of 380 ft. The steps to the main entrances, and also to all the internal staircases, are of stone from the Shepley Quarries. The whole buildings are fireproof, the floors and flat roofs being constructed in hollow brick on the "Kleine" principle, while all structural steelwork is fireproofed in cement. Fire hydrants are provided in suitable positions.

The accommodation comprises three halls, the Lecture Hall, Assembly Hall, and King George's Hall. The first-named, situated on the lower ground floor, is reached by a staircase to the right of the main entrance in Northgate, with cloak-rooms, retiring-rooms, etc., and a small gallery at the end. The floor is laid on springs for dancing, but when the hall is used for other purposes these springs are locked, making the floor rigid. There is accommodation for 500 persons in the Lecture Hall.

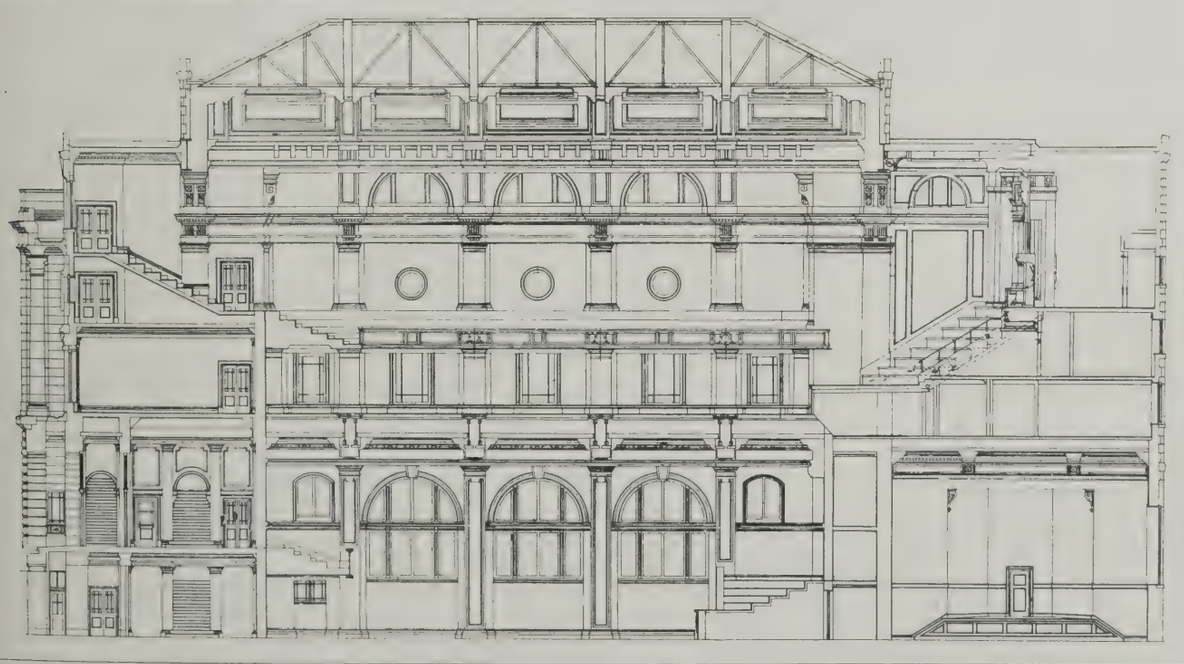
The Assembly Hall, also situated on the lower ground floor, is reached by the two side entrances at the Blakey Moor end. This hall, capable of holding 1,200 persons, including the gallery and platform, is also provided with a spring floor.

The three main arched entrances from Blakey Moor lead into a spacious entrance hall on each side of which is a wide staircase leading up to a foyer on the first floor, and giving access to the main floor of King George's Hall. The entrances on each side of the main entrance vestibule lead direct to the large gallery in this hall, which is supported on cantilevers and is provided with tip-up seats capable of accommodating 840 persons, with separate cloak-room, lavatories, etc. The main body of the hall, which has a floor area of 1,000 sq. yds., has accommodation for 1,803 persons, and is filled with portable chairs. The orchestral platform is capable of accommodating a chorus of 206 persons and a band of 60. There is a total accommodation in this hall for 3,885 persons. The whole of the decorative enrichments and features are carried out in fibrous plaster. The floor of King George's Hall is executed in narrow polished oak boarding, and the whole of the gallery is tiered so that each person will get an uninterrupted view of the platform.

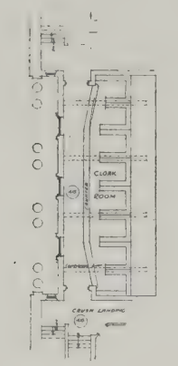
The large four-manual memorial organ, which is now being erected at a cost of £12,000, will be one of the finest in the country. The organ case, executed in English oak, has been designed by the architects in the late Renaissance style to be in keeping with the decorative scheme of the hall and buildings in general.

The architects for the whole scheme, who were appointed after competition, were Messrs. Briggs, Wolstenholme, and Thornely, of Blackburn and Liverpool, and Messrs. Stones and Stones (later Messrs. Stones, Stones, and Atkinson), of Blackburn and Liverpool.

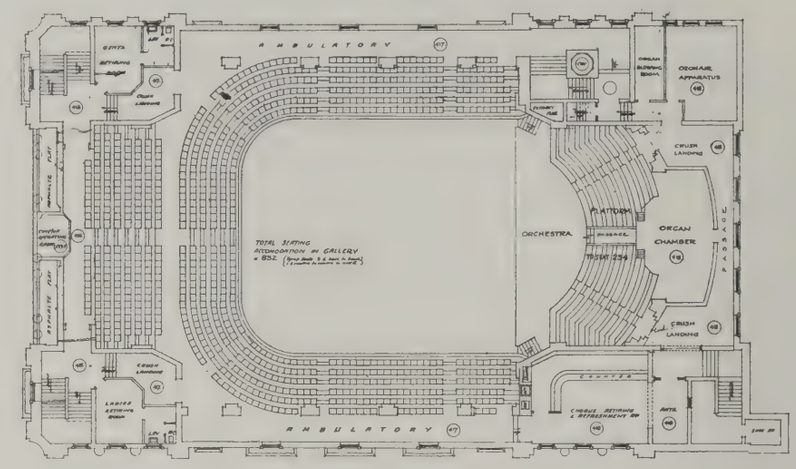
The general contractors were Messrs. Woof Cronshaw and Sons, Ltd., Blackburn. Mr. J. H. Colmar, Liverpool, acted as clerk of works. Among the subcontractors were: Skipworth, Jones, and Lomax, Manchester (steel work, steel construction, and girders), "Kleine" Hollow Brick Flooring Co., London (fireproof floors and partitions), W. H. Ainsworth, Blackburn (general plastering), J. Garstang, Blackburn (painting), Goodlass, Wall & Co., Ltd., Liverpool (wall decorations), New Quarry, North Wales (supplied through R. Fletcher, Ltd., Blackburn) (Velinhelli slates), Humphries, Jackson, and Ambler, Ltd., Manchester (casements and casement fittings), F. Airey, Blackburn (plumbing and sanitary work), Twyfords, Ltd. (sanitary ware and fittings), Art Pavements and Decorations, Ltd., London (Armadek flooring and mosaic paving), C. T. Briscoe and Son, Ltd., Blackburn (electric wiring), J. Tanner and Son, Liverpool (plaster work), J. P. White and Sons, Ltd., Bedford (special woodwork, panelling, carving, and organ case), George Wragge, Ltd., Manchester (art metal-work, special designs), General Electric Co., London (electric-light fixtures), J. W. Bridge, Ltd., Accrington (door furniture and locks), Harris Wood, The Shepley Stone Quarries (staircase stone), Rushworth and Dreaper, Ltd., Liverpool (organ).



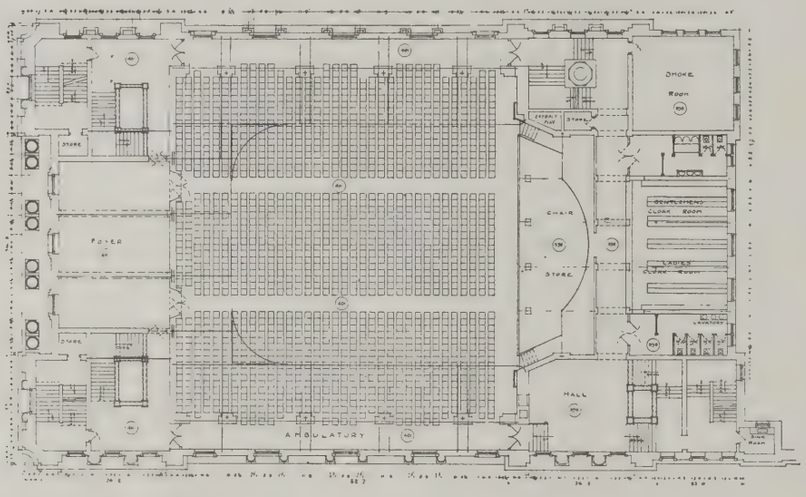
NEW PUBLIC HALLS, BLACKBURN: CROSS SECTION
BRIGGS, WOLSTENHOLME, AND THORNELY; AND STONES, STONES, AND ATKINSON, JOINT ARCHITECTS.



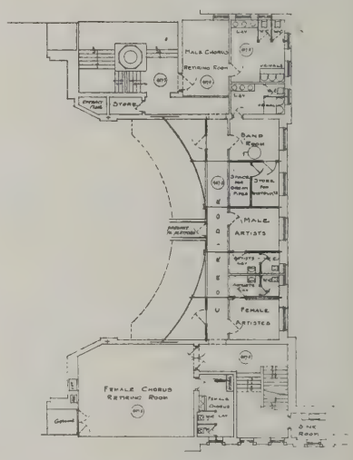
MEZZANINE UNDER BACK GALLERY HALL.



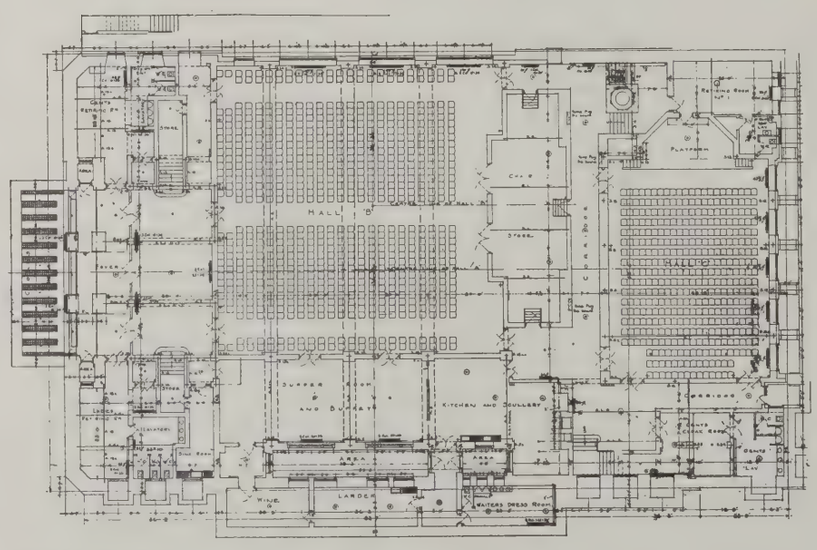
PLAN AT LEVEL OF GALLERY.



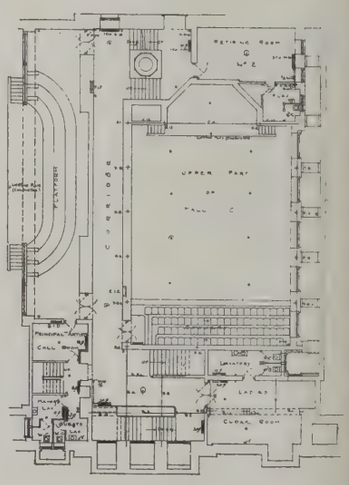
PLAN AT MAIN FLOOR LEVEL



MEZZANINE BETWEEN HALL FLOOR AND GALLERY.

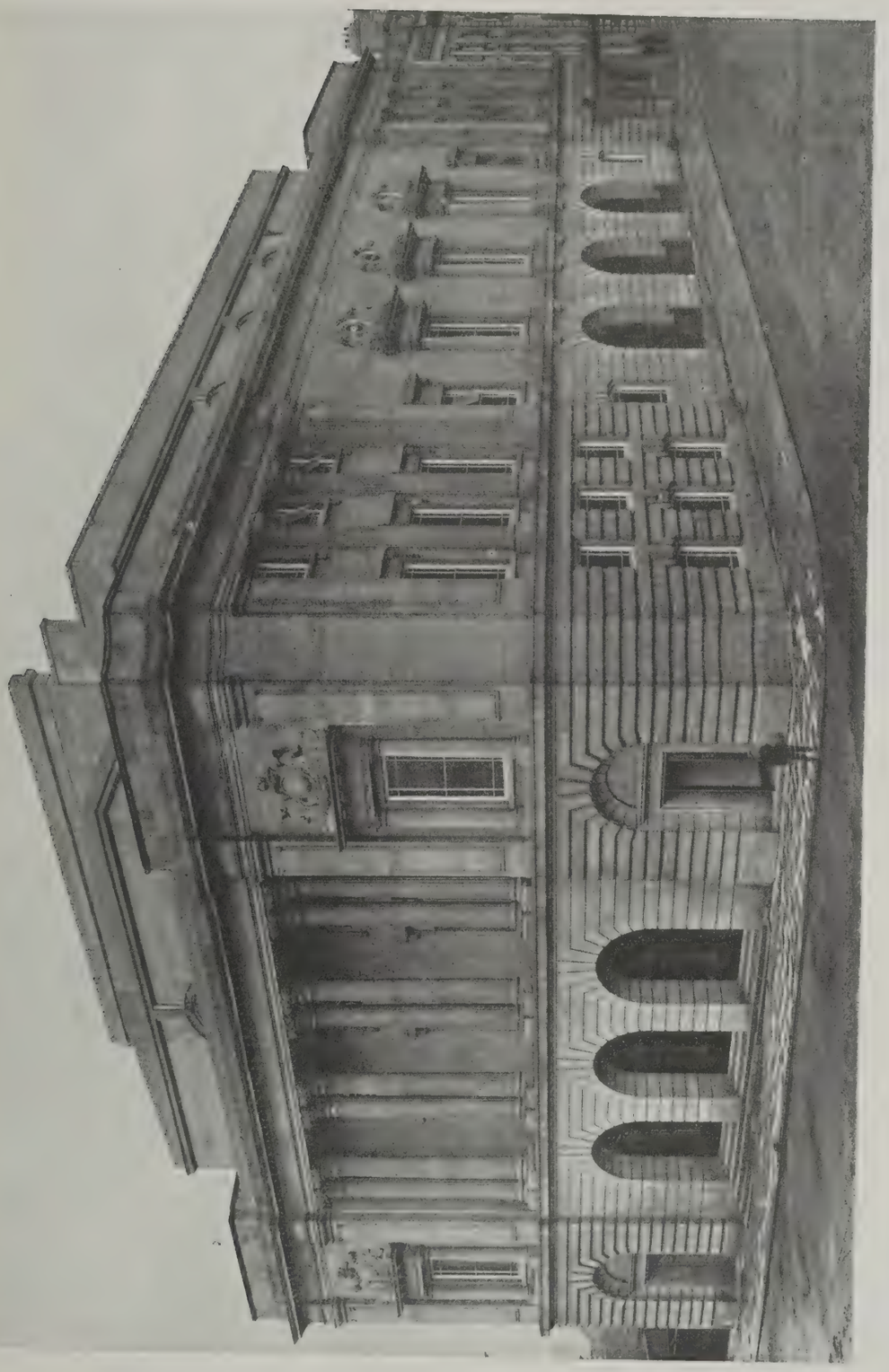


PLAN AT BASEMENT FLOOR LEVEL



MEZZANINE BETWEEN BASEMENT AND GROUND FLOOR.

NEW PUBLIC HALLS, BLACKBURN: PLANS.
BRIGGS, WOLSTENHOLME, AND THORNELY; AND STONES, STONES, AND ATKINSON, JOINT ARCHITECTS.



NEW PUBLIC HALLS, BLACKBURN.

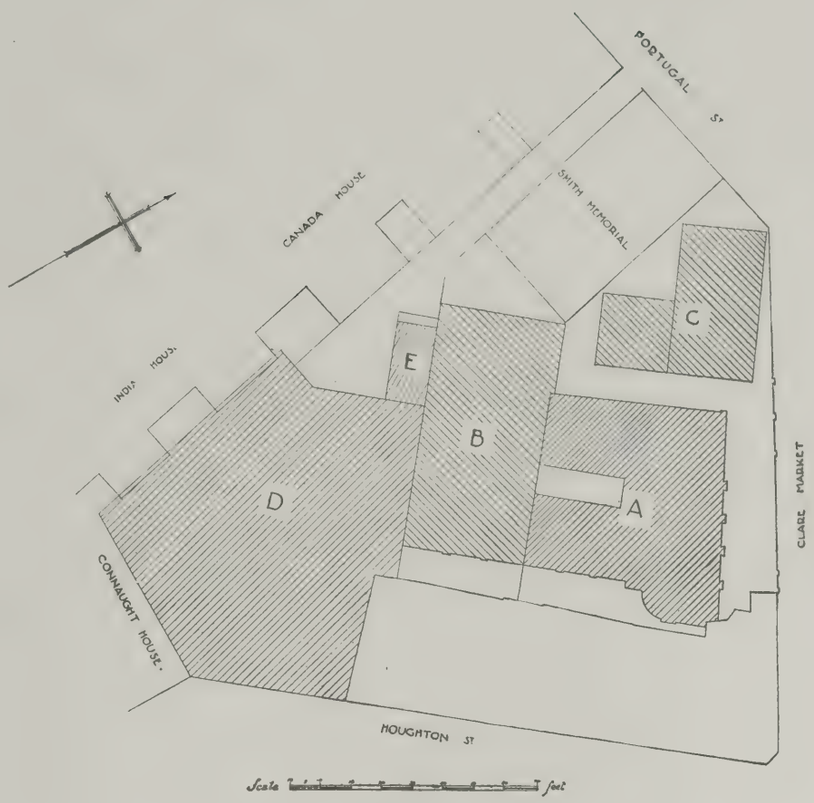
BRIGGS, WOLSTENHOLME, AND THORNELY; AND STONES, STONES, AND ATKINSON, JOINT ARCHITECTS.

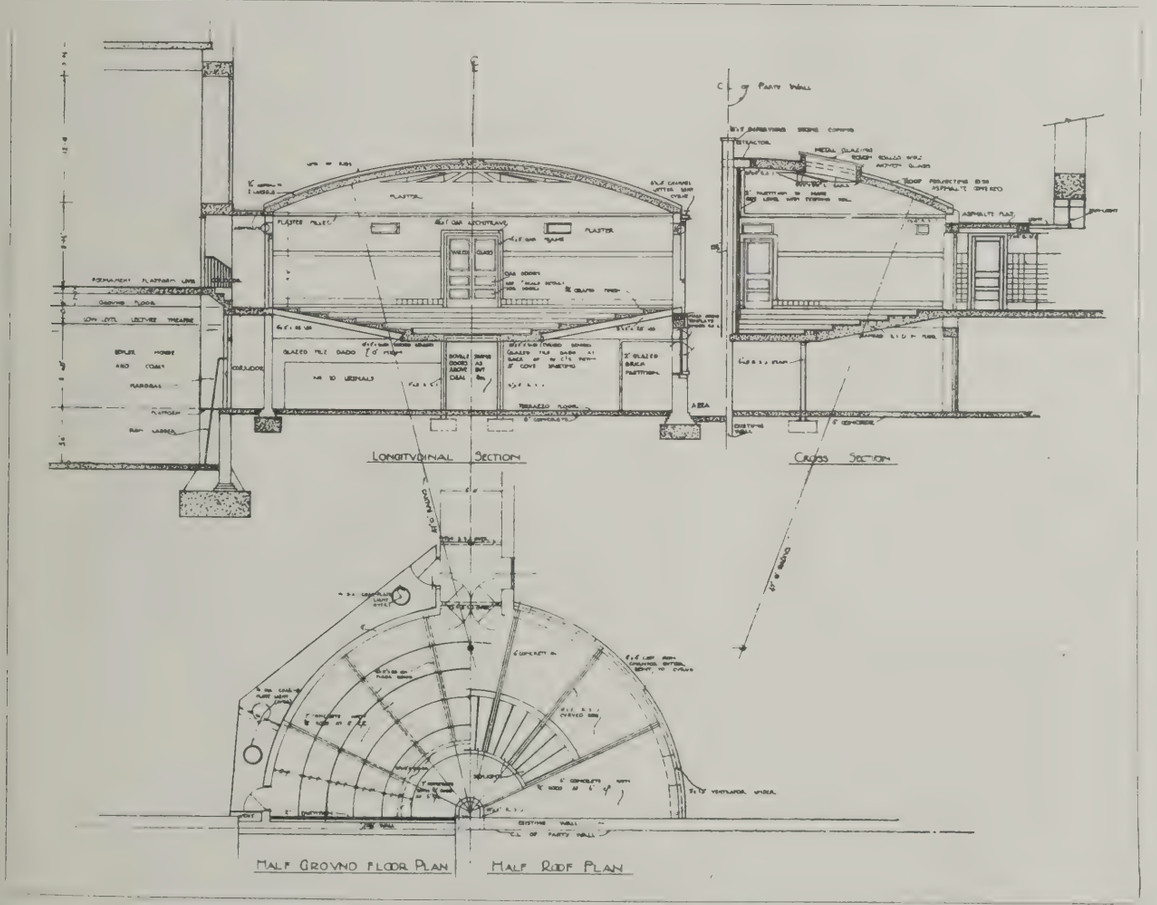
NEW PUBLIC HALLS, BLACKBURN.

BRIGGS, WOLSTENHOLME, AND THORNELY; AND STONES, STONES, AND ATKINSON, JOINT ARCHITECTS.

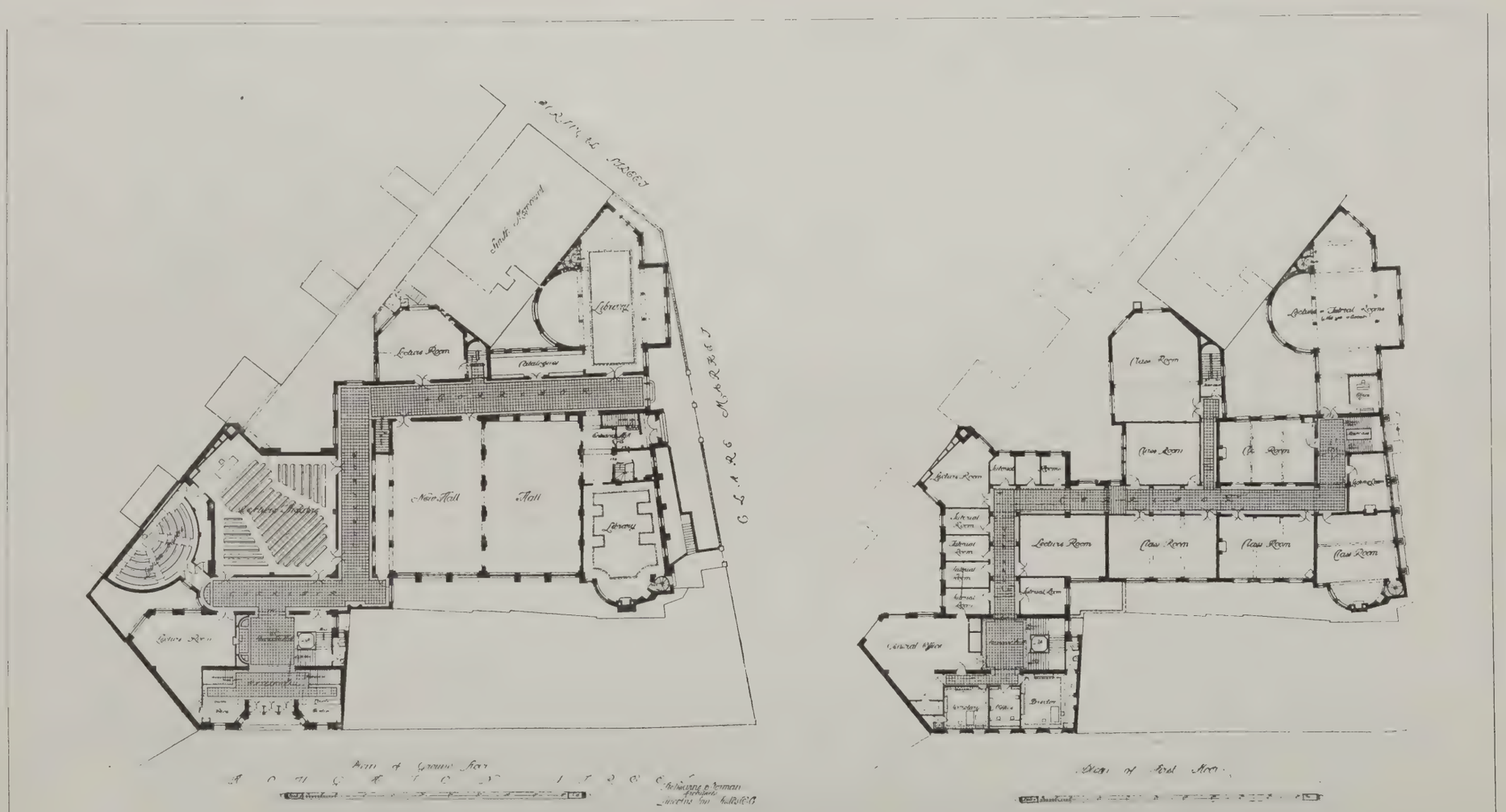
2.—London School of Economics

N planning the London School of Economics and Political Science, the architects, Messrs. Trehearne and orman, encountered many exceptional fficulties. The old school proper occued site A, the semi-permanent extension te B, iron huts site C, whilst site D was icant. The conditions were that the uilding on site D was to be erected first ithout interfering with work in either of e other three portions. Site B was then be taken in hand, and a high building ected on the old basement and ground or. This was to be done whilst the uildings on site A, C, and D were in full orking order, there being insufficient commodation for the buildings on B to dismantled until D was available. hen the permanent building on A had be adapted to link up with schemes and B without stopping the work on A, though the alterations were very conslerable. Site C presented no difficulties, lt that could not be tackled until last as fe accommodation could not be spared. Block A was erected when conditions i the labour market were at their most stringent stage, and the difficulties were increased by arrangements for the foundtion stone laying by the King. Actually the foundations were being laid whilst staging for nearly a thousand spectors was being erected above. The lst touches to the staging were not completed more than an hour before the arrival of the King and Queen, and Princess Mary.

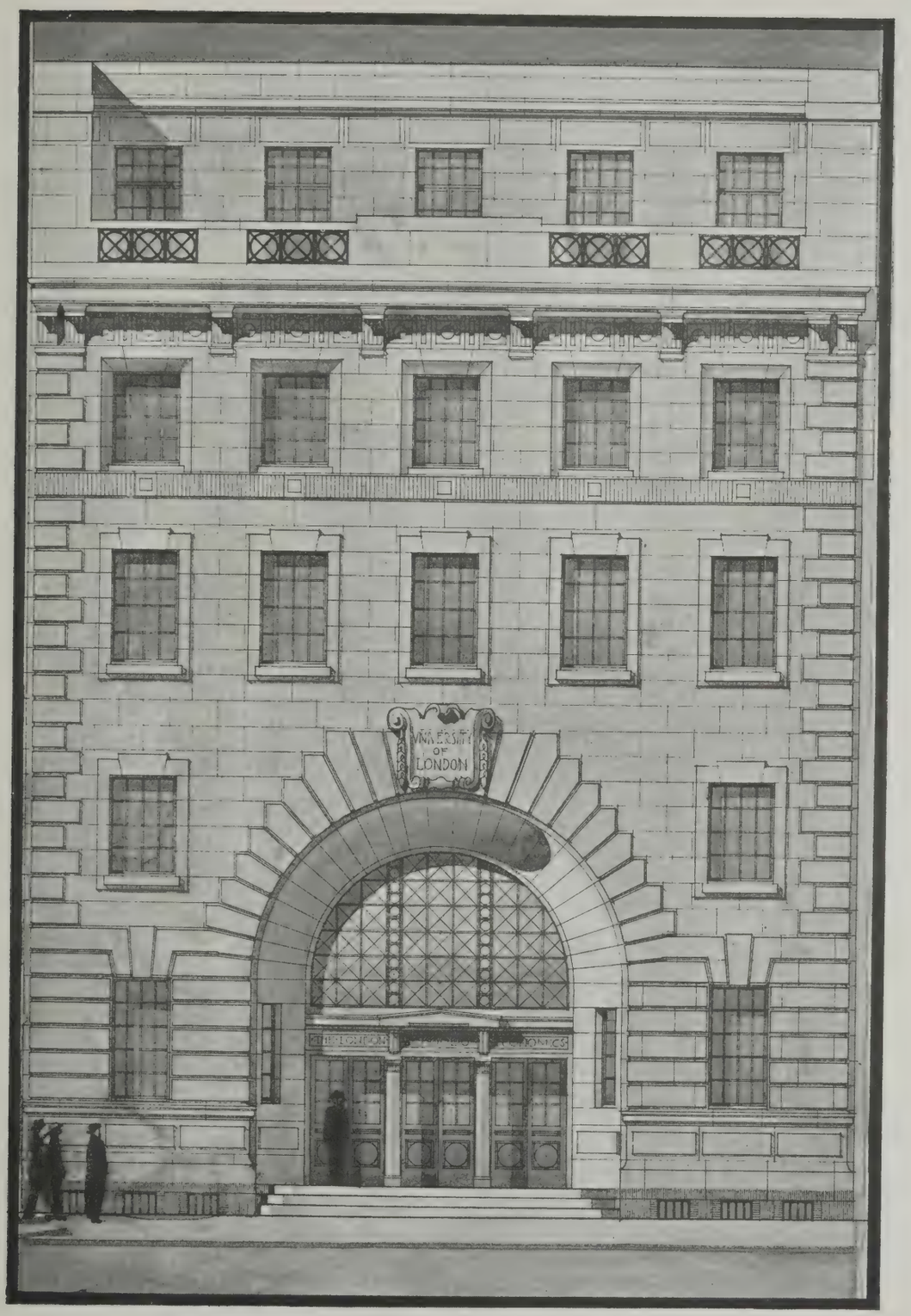




THE LONDON SCHOOL OF ECONOMICS: LECTURE THEATRE.
TREHEARNE AND NORMAN, ARCHITECTS.



THE LONDON SCHOOL OF ECONOMICS: PLANS.
TREHEARNE AND NORMAN, ARCHITECTS.



THE LONDON SCHOOL OF ECONOMICS: ELEVATIONAL DRAWING.
TREHEARNE AND NORMAN, ARCHITECTS.

THE LONDON SCHOOL OF ECONOMICS: DETAIL OF ENTRANCE.
TREHEARNE AND NORMAN ARCHITECTS.

The shape of the site is hardly one ıich would be considered, at the first ısh, as suited to an important Univer-y building, whilst the height of the joining building along the north-west undary (over 100 ft. in the sheer per-ndicular) made the problem of lighting ore than usually complicated. A eatre for 600 people had to be provided the ground floor. Site D was the only e large enough to take this, and then ly if there were no passages, which, of ırse, there had to be. This difficulty s overcome by the mezzanine gallery, ıich runs back right over the main dog-ged passage.

To make matters worse the permanent ilding A is by no means rectangular, ilst access between A and D by a ound-floor passage was blocked by the t that the hall in Block A had to be plicated in B, thus giving no room hout coming out upon the yard E, ich was a common right of way for f a dozen other people. The consent these people was obtained by the ar-tects, who fortunately had acted at ne time or the other for practically all people who had rights over this yard, l this was obtained without any com-ısation being paid in any instance. As ıs anticipated that the school may in ure have to accommodate many more n its present three thousand students, l as there is no certainty that the size he site can be increased, provision had be made for the possibility of raising the new portions of the building by a further three floors. The planning of the theatre was complicated by the fact that clear space had to be left in spite of having to provide to carry the weight of six floors of building above, a problem hardly, if ever, met in modern London theatre construction. The old building had become absolutely inadequate, and the shortage of circulation space and corridors, of cloak-rooms and lavatories, of common rooms, refectory, and kitchen accommodation, had become intolerable. There was no recreation space, whilst ventilation suited to present needs was practically non-existent.

LECTURE THEATRE.

THE LONDON SCHOOL OF ECONOMICS: ELEVATION.
TREHEARNE AND NORMAN, ARCHITECTS

The chief points aimed at in the design of the new building, and in the modification of the old, have been light, ventilation, and economy in upkeep. As to the first, in spite of the difficulties presented by the extraordinary site, there is no room in any part of the new building where artificial light is required in the daytime. Ventilation is secured not only by providing every room with a large area of window opening into unenclosed areas, but also by providing every class-room with an air-duct through which the air is extracted by electric fans at roof level. In the case of the largest rooms additional ventilation is supplied on the Plenum system, whereby fresh air is drawn into the building, heated, and discharged into the rooms at easily regulated velocities.

The general scheme consists of refectory, kitchens, and common rooms on the top floor; class-rooms, to accommodate 60 to 180 students each, on the second and first floors, and a large number of separate tutorial rooms for the professors and lecturers; a theatre, large lecture halls, gymnasium, reading-room, and library on the ground floor; and an immense book store, lavatories, cloak-rooms, boiler-house, etc., beneath.

In considering the elevation, the fact had to be faced that while the building would have to accommodate many thousands of students, it had only a very small frontage. The only effective way to deal with this was to treat the frontage solely as an entrance, consequently dominating importance was given to the doorway in the design. This large opening is the only possible source of light for the important entrance, passages, and staircases which radiate from it.

The great hall or lecture theatre, which accommodates 650 students, is designed on a novel plan. By placing the stage along one corner of a square, which becomes a much larger square at the gallery level, an economical auditorium in which

THE NEW LONDON COUNTY HALL: PART VIEW OF THE CRESCENT FACING THE RIVER.

every seat has a perfect view evolves itself.

The general heating scheme, which involved partial scrapping of, and partial linking up with, the heating of the old building, was designed by Mr. A. H. Barker. The common rooms have, in addition, fireplaces of simple design, Adamantine tiles being built around the interiors.

Interesting minor details are the semi-circular small lecture theatre on the ground floor, the pair of fives courts on the roof, and the up-to-date kitchen arrangements where all the cooking for the refectory is done by gas. The walls and ceilings of the kitchens and offices—the refectory itself has a pitch-pine floor for dancing—attached are in white glazed tiles and the floors in red quarries. Shower baths for both the men and the women students are installed in the basement. The walls of the refectory are panelled in oak by the Southampton Steam Joinery Co. All the gas cooking apparatus, including gas roasting ovens, steamers, carving tables, hot closets, water boilers, boiling pans, etc., are being supplied by Messrs. Benham and Sons, Ltd. The oak block flooring was laid by Mr. Jos. F. Ebner.

Messrs. Bovis, Ltd., were the general contractors, and the sub-contractors were as follows: Thos. Faldo & Co. (asphalt (lining work) and roofs), Nine Elms Stone Co. (stone), Lindsay's Paddington Ironworks, Ltd. (steel work), Kleine Co. (fireproof floors), W. B. Simpson and Sons (tiles, wall, ceiling, and floor), Humphries, Jackson and Ambler, Ltd., and The Brunswick Engineering Co (casements and casement fittings), The British Luxfer Prism Syndicate Ltd. (pavement lights), Bratt, Colbran & Co. (stoves and grates), Tylors, Ltd. (sanitary ware and fittings), J. F. Ebner, British Magnesite Flooring Co., W. B. Simpson and Sons (wood block and parquet flooring), Leyland and Birmingham Rubber Co. (rubber and rublino flooring), Locke and Soares (electric wiring), P. H. Barker and Son, Hitchin (special woodwork), Wotton and Sons, Croydon (fire-resisting glazing), Strode & Co., Ltd. (art metal work), Locke and Soares and Albert Lee & Co. (electric-light fixtures), Jas. Gibbons, Ltd. (door furniture and locks), Strode & Co., Ltd. (lift enclosure and gates), Patent Impervious Stone Co. (stair treads), Waygood, Otis, Ltd. (lifts), G. N. Haden and Sons, Ltd. (heating and ventilating), Synchronome Co., Ltd. (clocks), Benham and Sons (cooking machinery), and Bennet Furnishing Co. (cloak-room fixtures).

3.—London's New County Hall

Great progress is being made with the erection of the new London County Hall. The crescent of the river front is probably the most striking architectural feature of the building, with its large Ionic order embracing four storeys, columns over 40 ft. in height, and bold, sweeping, horizontal lines. The treatment of th roof is quite unusual in this country, th prominence of which is emphasized wi Italian roofing tiles of rich red colour.

The wood-carving generally is by M G. Alexander, R.B.S., the figure sculptu in Portland stone and bronze above th heads of the pavilion windows of the pri cipal floor is the work of Mr. Ernest Co and Mr. C. H. Mabey is responsible f architectural carving in stone. The co tractors for the foundations were Messr F. and H. F. Higgs; for the superstructu Messrs. Chas. Wall, Ltd.; and t main contracts for the superstructu Messrs. Holland and Hannen and Cubit Ltd.

Mr. Knott's consultant engineers f structural steelwork are Messrs. Whitak Hall and Owen, of 1 Gresham Buildin

The lighting, bell, and lift installatio and other electrical works required f the building are being carried out und the direction of the Council's Chief E gineer, Mr. G. W. Humphreys, C.B. M.Inst.C.E.

Other contractors are: Structural ste work, Messrs. E. C. and J. Keay, Ltd., a J. Westwood & Co., Ltd.; decorati marble work, Messrs. Farmer and Brindle steel casements, Messrs. Henry Hope a Sons; sanitary work, Messrs. Doulton Co.; general heating system, Mess J. Jeffreys & Co., Ltd., in assoc tion with Richard Crittall & Co., Lt G. N. Haden and Sons, Ltd., and F. Norris and Dutton, Ltd.; heating a ventilation of council chamber and la committee room, Messrs. Buffalo Fo Co.; general plastering, Messrs. A. and Wheater, Ltd.; decorative plaster, Mess Boekbinder and Sons (London), Lt ornamental leadwork, Mr. G. P. Banka floor and wall tiling, Messrs. W. Simpson and Sons; wood-block floori The Acme Flooring and Paving Co., Lt roof tiling, Messrs. Ames and Finn patent roof glazing, Messrs. Pennyco lantern lights, British Luxfer Prism C Ltd.; bronze panels, Messrs. J. W. Sin and Sons; copper finishings to dorm windows, Messrs. F. Braby & C Ltd.; asphalte, La Brea Asphalte C lifts, Express Lift Co., Ltd.

THE NEW LONDON COUNTY HALL: ELEVATION TO WESTMINSTER BRIDGE ROAD RALPH KNOTT, F.R.I.B.A., ARCHITECT, WITH W. E. RILEY, F.R.I.B.A., M.INST C.E R B.A., OFFICIAL ARCHITECT TO THE L.C.C.

The Reconditioning of Old Buildings

1.—Kelly's Building in the Strand

ONE of the most extensive building reconstruction schemes carried out in London for some time past has been completed from the designs of Mr. H. M. Newlyn, architect, at 186 Strand, and Derwent House (at the back) in Arundel Street. These premises, lately occupied by Messrs. W. H. Smith and Son, have been acquired by Messrs. Kelly's Directories, Ltd., to accommodate their offices and head depôt. The external walls have been steam cleaned, the front façade to the Strand has been one having deep ornamental cornices carried round all the panels.

The old narrow entrance has been replaced by a wider one of granite. Special features of this new entrance are the granite columns and the ornamental projecting curved pediment supported on ornamental truss granite brackets. Beyond the entrance is a mahogany panelled lobby which has swing doors, a panelled ceiling with a domed electric light in the centre panel, and a mosaic floor.

Derwent House (the back premises) in Arundel Street has also been converted into offices, and each floor divided up by partitions and screens of artistic design. Panelled counters, plaster ceilings and cornices have been fixed, new jointless floors laid, new lavatories and

THE KELLY BUILDING IN ITS PRESENT FORM.
H. M. NEWLYN, ARCHITECT.

chiselled by expert stonemasons, and the old woodwork has been cleaned off and either painted or polished.

Originally the ground floor had a matchboarded ceiling supported by irregularly spaced and shaped columns, some of iron and some of wood, resting on a boarded floor. This has been transformed entirely, and treated in a Classic architectural manner. The light irregular columns have been cased in marble, and provided with ornamental bronze caps and marble pedestal bases, and the ceiling has been replaced by a fine panelled

The ground floor is divided up by means of richly panelled mahogany polished counters and screens; and rails on ornamental wrought-iron scrolled standards. The floors of the corridors between are of large rubber tiles laid on concrete, the other floors being of red jointless flooring, waxed and polished. There is a raised panelled mahogany balcony at the far end of the room; and from the centre of each ceiling panel is suspended a bowl light supported by heavy bronze chains and roses. The main entrance, staircases, and passages have been overhauled, mosaic floors, landings, and stairs installed, and the walls have been cased in marble. An electric lift serves every floor from basement to the top floor. The whole of the building is heated by hot-water radiators.

sanitary accommodation with hot-water supplies installed, and new kitchens, dining-rooms, and cloak-rooms have been arranged. Private lavatories, bathrooms, and emergency living-rooms have also been provided for the chairman and directors, and a roof-garden or open-air recreation quarters arranged for the female staff.

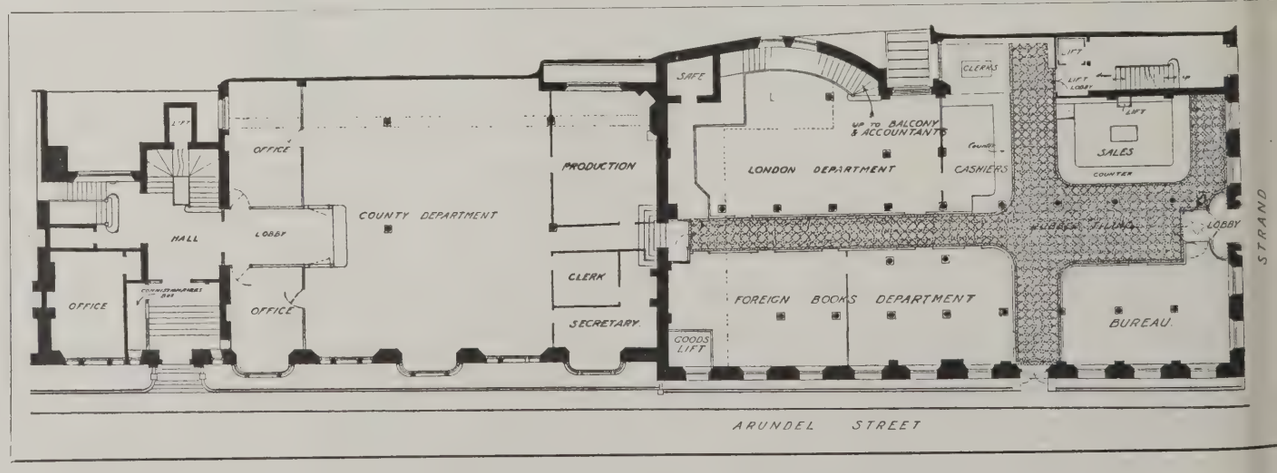
Two board-rooms have been installed and provided with oak-panelled walls, fine decorative ceilings, good lighting effect, and oak-panelled sliding partitions. The furniture to the board-rooms

KELLY BUILDING.—RE-DESIGNED GROUND FLOOR.
H. M. NEWLYN, ARCHITECT.

has been designed in character with the wall panelling.

The buildings are fitted throughout with a most up-to-date telephone system, giving intercommunication to all offices and departments. Private and trunk boxes are also installed, and a system of electric bells and calls to the directors' rooms. In addition electrically synchronized (from Greenwich) clocks have been installed in every office throughout the building. Fire alarms are also provided. On the ground floor is the enquiry bureau, where electric dictaphones, telephones, writing desks, and reference libraries, etc., have been arranged for the convenience of Messrs. Kelly's many subscribers.

The "Post Office Directory" first appeared 120 years ago, when the compilation was chiefly the work of the postmen themselves; but since 1836 it has been inseparably associated with the name of "Kelly." The firm's first office was in Old Boswell Court—a cul-de-sa leading from the Strand—which wa demolished to make room for the La Courts. From there the firm transferre to Portugal Street, afterwards to Grea Queen Street, and since 1892 their office have been in High Holborn. The firn now publish over 140 different directorie and charts. The reconstruction an conversion of the building has been carrie out to such an extent that the old interio cannot be recognized.



PLAN OF THE RECONSTRUCTED KELLY BUILDING
H. M. NEWLYN, ARCHITECT.

The general contractors were Messrs. llby and Gayford, Ltd., and the sub-con-ıctors as follows: F. de Jong & Co. ecorative plaster-work), Fenning & Co. olished granite entrance), Central Heat-g Co. (central heating system), Waygood-is, Ltd. (lifts), Steam Cleaning Corpora-n (processed the stonework, etc.), Ley-nd and Birmingham Rubber Co. (rubber tile floor), India Rubber Co. (rubber mats), Fawcett Construction Co. (constructional steelwork), S. Bysouth and Son (stone-mason work), Rashleigh Phipps & Co. (electric light installation), Field Mallett & Co. (wrot ironwork), Francis Polden & Co. (electrical fittings), Safety Tread Syndicate (Mason's patent treads), H. H. Elliott (joinery partitions, etc.), H. Hanson (part mahogany fittings), W. H. Heywood & Co. (patent glazing bars, Jos. Chater & Sons, and Nicholls & Clarke, Ltd. (glazing), Haywards, Ltd. (pavement lights), J. B. Lee & Son, Ltd. (flooring), C. Towner (plumbing, etc.), Thornborough & Co. (revolving shutters), Jos. F. Ebner (Ebnerite jointless flooring), Magneta Time Co., Ltd. (magneta clocks, etc.).

2.—Manchester Hotel, Aldersgate Street

THE transformation of an old-fashioned hostelry, unattractive in appearance and inconvenient in rking, into a modern hotel of the most proved type, is a task that calls for no tle ingenuity on the part of both archi-ct and contractor. Apart from the tual structural difficulties to be over-me, problems of planning arise at every rn, and the question of how to utilize ery inch of space so as to provide the aximum of comfort to the guests, and profit to the management, calls for owledge of many things outside the dinary province of the architect.

The reconstruction of the Manchester otel, Aldersgate, was marked by un-ual complications, and proportionally aborate precautions had to be taken to ard against the possibility of grave aster. When one considers that, at e stage of the work, the ground floor d basement were practically gutted, ring which time the whole superstruc-re had to be shored up preparatory to the sertion of the huge steel stanchions cased in concrete and girders on which s now carried, one's respect for modern gineering achievements is proportion-ly increased.

The original building consisted of five ories, the kitchens and service arrange-nts being most inconveniently situated the top floor. This has been entirely remodelled, and liberal sleeping accommodation for the staff substituted for the previous arrangement. Additional rooms have been provided by raising part of the main roof, and so permitting the construction of an extra floor, containing heated linen and store rooms. A new staircase has been built, and three lifts, two service and one for passengers, provided. Hydrants are in full supply.

The most noticeable feature of the reconstructed ground floor is seen in the luncheon bar, reputed the longest in London, which occupies the whole length of one side of the hotel. It is elaborately fitted, and finished in Japanese oak and fireproof glazing. Adjoining it is a pastrycook's shop, and the remainder of the floor is chiefly occupied by a pleasantly furnished lounge, and by the main restaurant, decorated with mahogany and panelling, and capable of seating 326 people. Opening from this is a kitchen, ensuring all the advantages of direct service.

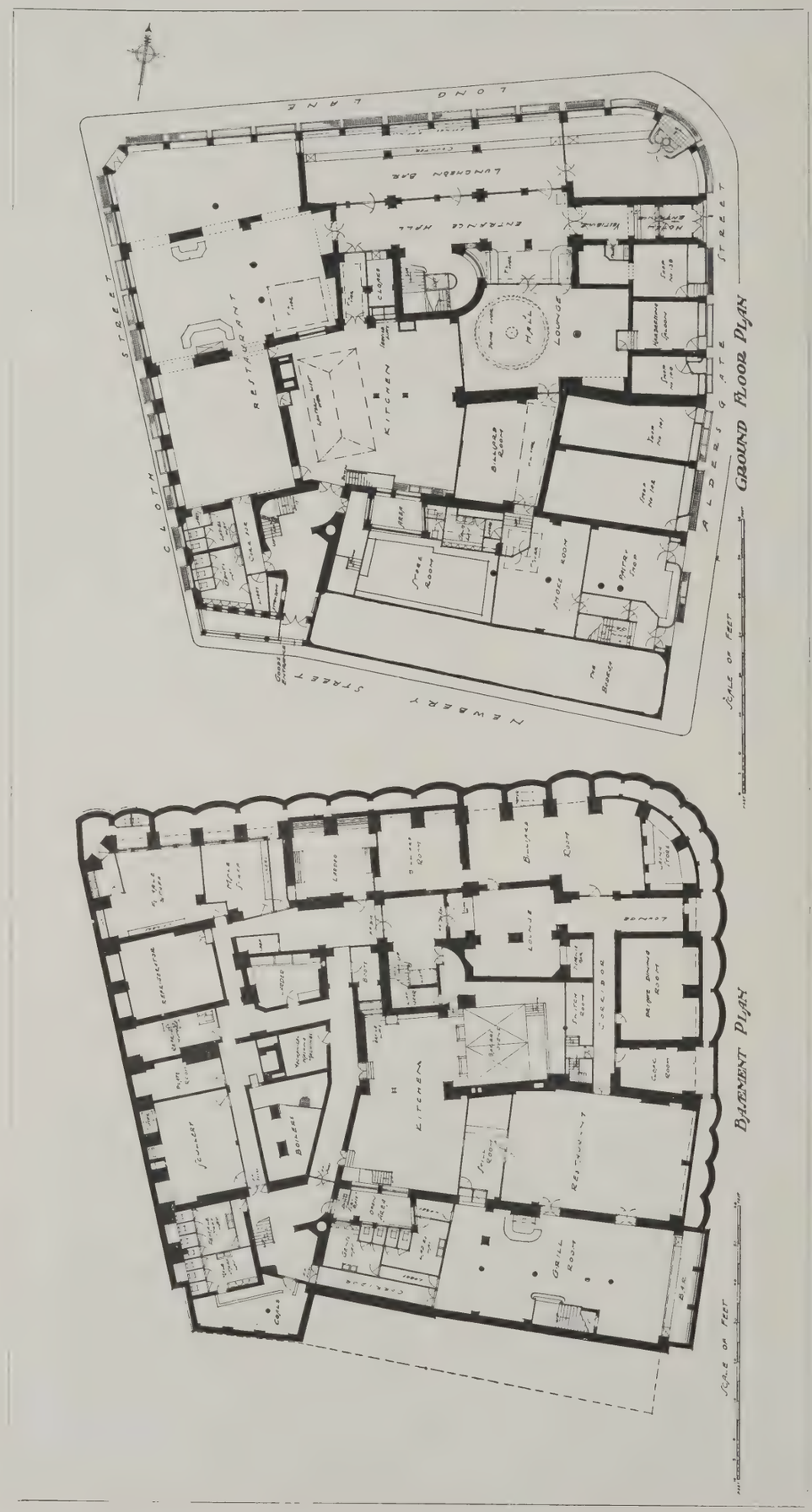
The basement comprises a second and slightly smaller restaurant finished with white panelling and mirrors, a grill-room, and a private dining-room decorated with sporting pictures and designed for club gatherings. The kitchen on this floor is equipped with four large Perkins ovens, the installation of which makes the hotel independent of an outside baker. The larders contain ample refrigerator accommodation, and large quantities of perishable food can be safely stored. Below this again are boiler-rooms and wine cellars. A running spring was found beneath the foundations, and this is dealt with by the provision of an automatic pump.

The upper floors of the hotel contain 260 bedrooms and 30 bathrooms, the sanitary arrangements being new and particularly complete. A panelled writing-room, drawing-room, and several private sitting-rooms and suites are also included. The whole building is heated by low-pressure hot water and ventilated by a special installation of ducts.

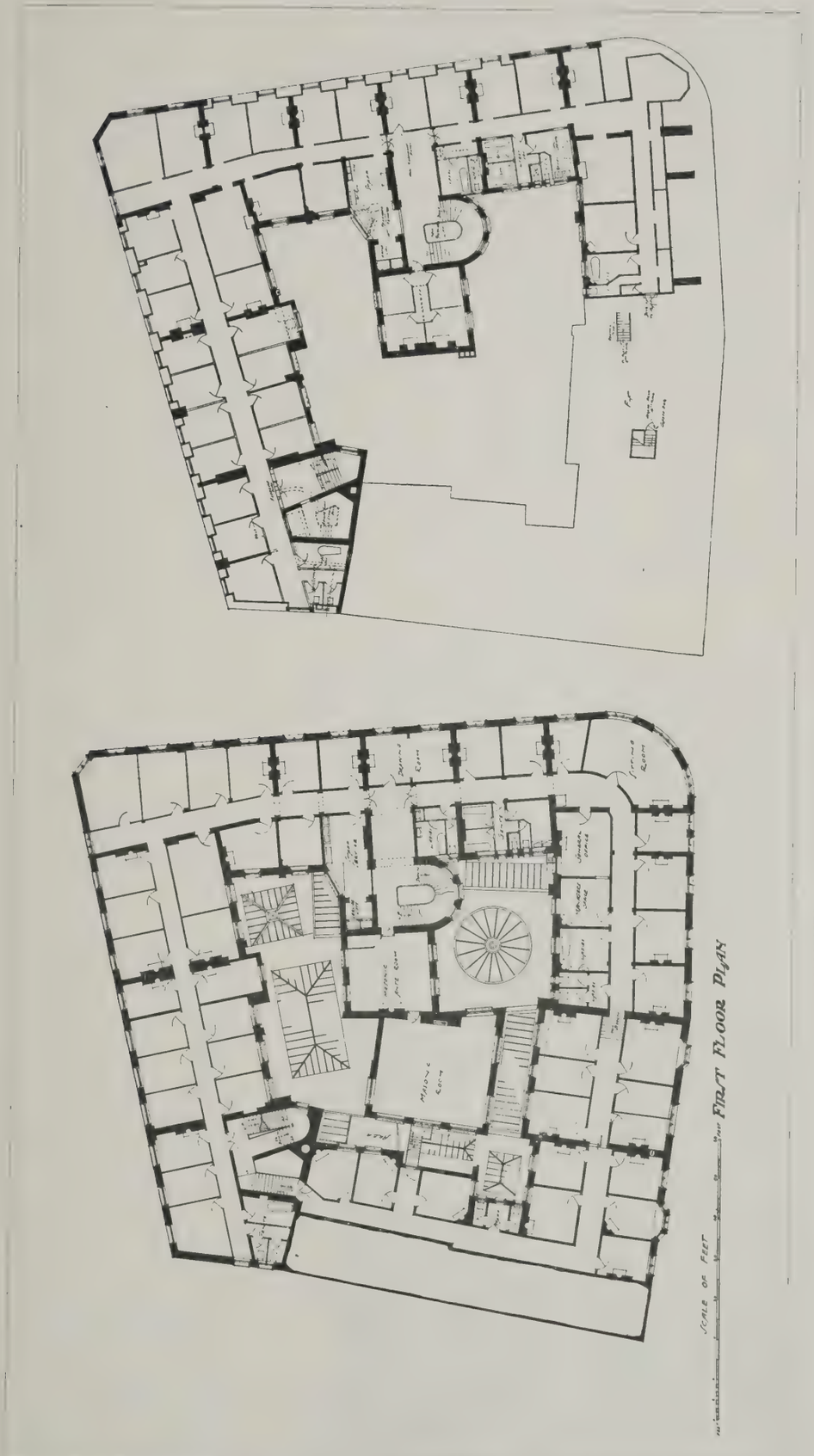
The electrical installation consists of nearly a thousand lighting and over three hundred bell points. In addition to this it comprises eleven motors of various sizes. Numerous fans and other electrical appliances are also included.

Messrs. Rice and Son were the general contractors for the work, and were responsible for all the joinery and fittings. Other contractors were: Mellowes & Co. (sanitary installation, kitchen and still-room equipment), The Medway Lift Co. (lifts), The South Wales Structural Co. (steelwork), Stanley Jones & Co. (metal shop fronts), Mellowes & Co. (marble-work), Rowan and Boden (Ruboleum floors), Joseph Baker and Sons and Perkins, Ltd. (ovens), W. Dickinson & Co. (electrical installation).

THE RECONSTRUCTED MANCHESTER HOTEL.
SIR CHARLES T. RUTHEN, F.R.I.B.A., P.S.A., ARCHITECT.



MANCHESTER HOTEL: BASEMENT AND GROUND-FLOOR PLANS,
SIR CHARLES T. RUTHEN, F.R.I.B.A., P.S.A. ARCHITECT.



MANCHESTER HOTEL: FIRST AND FIFTH-FLOOR PLANS.
SIR CHARLES T. RUTHEN, F.R.I.B.A., P.S.A., ARCHITECT.

3.—The London Auction Mart

NO. 155 Queen Victoria Street, the building now occupied by the London Auction Mart, was originally a warehouse and showrooms, with hydraulic goods lift, wooden staircase, and no fire escape. Messrs. Trehearne and Norman, the architects, however, have ruthlessly gutted the building and redesigned the interior, with the result that the floors and accommodation now provided are just as modern and up-to-date as would be found in new premises. Even the genuine Portland stone front elevation, which was hidden beneath an accumulation of London smoke, is now, after having been cleaned, as fresh as ever.

At present the building comprises eleven auction rooms of varying sizes—the largest will seat about three hundred—all well above ground, and exceptionally well lighted, heated, and ventilated. Telephone boxes and consulting rooms are also provided. The entrance hall, staircase, landings, and upper halls are floored with rubber tiles, and a new electric passenger lift has been installed. On the ground floor are an imposing marble entrance hall, secretary's room, and clerks' office, together with a very large institute room for the use of the members. A feature of the decorations is that the whole of the walls of the public portion of the building are panelled in oak of the correct size for posting bills. This will ensure each poster being exhibited at eye level. The floors of the hall and landings are covered with a special sound-deadening material.

Negotiations are pending for the taking over of the Estate Exchange by the Institute, and it is hoped that arrangements may be made to house the Exchange at the Mart in the near future. The directors have not yet come to a decision with regard to the use of the large basement floor, but several applications to rent it have been received from firms of caterers. This floor is on the ground level of Upper Thames Street, from which it has an additional entrance. It has been decided that the charges for rooms of equal size shall be the same throughout, the idea being that a good lift service will render them all of equal value. One, if not the most important, feature of the new Mart is that it has been established under the auspices of the Auctioneers' and Estate Agents' Institute, and that its use for auction sales will be restricted to members of the Institute. Rooms, however, will be available for other purposes.

Several difficulties peculiar to the site and to the particular purpose of the building were encountered. The building has noisy streets at both front and back and the auction rooms have to light on to these. On the lower floors double windows are provided, but ventilation from the outer air being essential these double windows do not extend to the top of the opening, where there is only a single window. The noise is baffled here, however, by a valance of sound-absorbing material. In order to still further baffle the noise of streets and to assist the acoustics of the room whatever the size of the audience, the ceilings, are padded with special acoustic felt. Central heating is provided everywhere. All the "Ebnerite" flooring was laid by Mr Jos. F. Ebner.

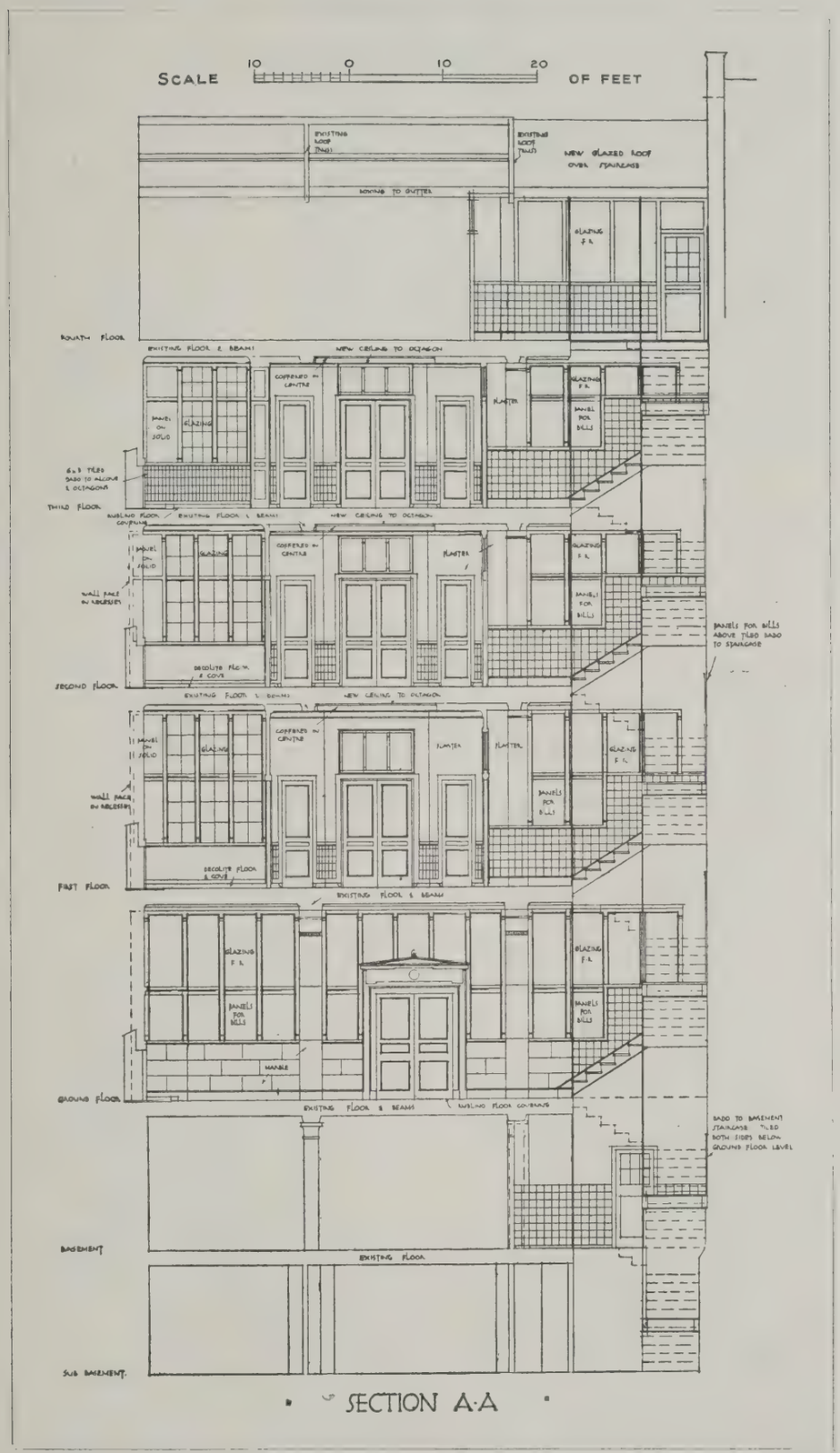
The general contractors were Messrs Green and Abbott, Ltd., and the sub-contractors as follows: W. B. Simpson and Sons (wall tiles), The British Luxfer Prism Syndicate, Ltd. (patent glazing), John Bolding and Sons, Ltd. (sanitary ware and fittings), Jos. F. Ebner (Ebnerite flooring), Hooley Hill Rubber Co. (rubber flooring), The Leyland and Birmingham Rubber Co. (Rublino flooring), Wotton and Sons, Croydon (fire-resisting glazing), Strode & Co., Ltd., and the Bromsgrove Guild (art metal work, special designs), General Electric Co. (electric light fixtures), Yannedis & Co. (door furniture, locks, etc.), Strode & Co., Ltd. (lift enclosure and gates), W. B. Simpson and Sons (marble work), Waygood-Otis Ltd. (lifts), Z. D. Berry and Sons (heating and heating apparatus).

It is interesting to note that the foundation stone of the first real auction mart in London—erected in the Classic style at the corner of Bartholomew Lane, with a return frontage to Throgmorton Street—was laid on September 20, 1808, by Lord Mayor the Right Hon. John Ansley who attended in state. Beneath the roof of this fine old building the business of auctioneering grew and developed rapidly. It was the house of the "Trade," and the selling place of all auctioneers until the building was pulled down.

The bulk of the estates throughout the kingdom were offered there, and the larger rooms were often engaged for exhibition purposes. In fact, the place became one of the busiest centres in London, and its fine central position was soon recognized as adapted for other important purposes. In 1864 the building was sold to the Estates Company for a sum which represented a very considerable increase in the value of the site, on which the Alliance and Parr's Banks subsequently occupied part as headquarters.

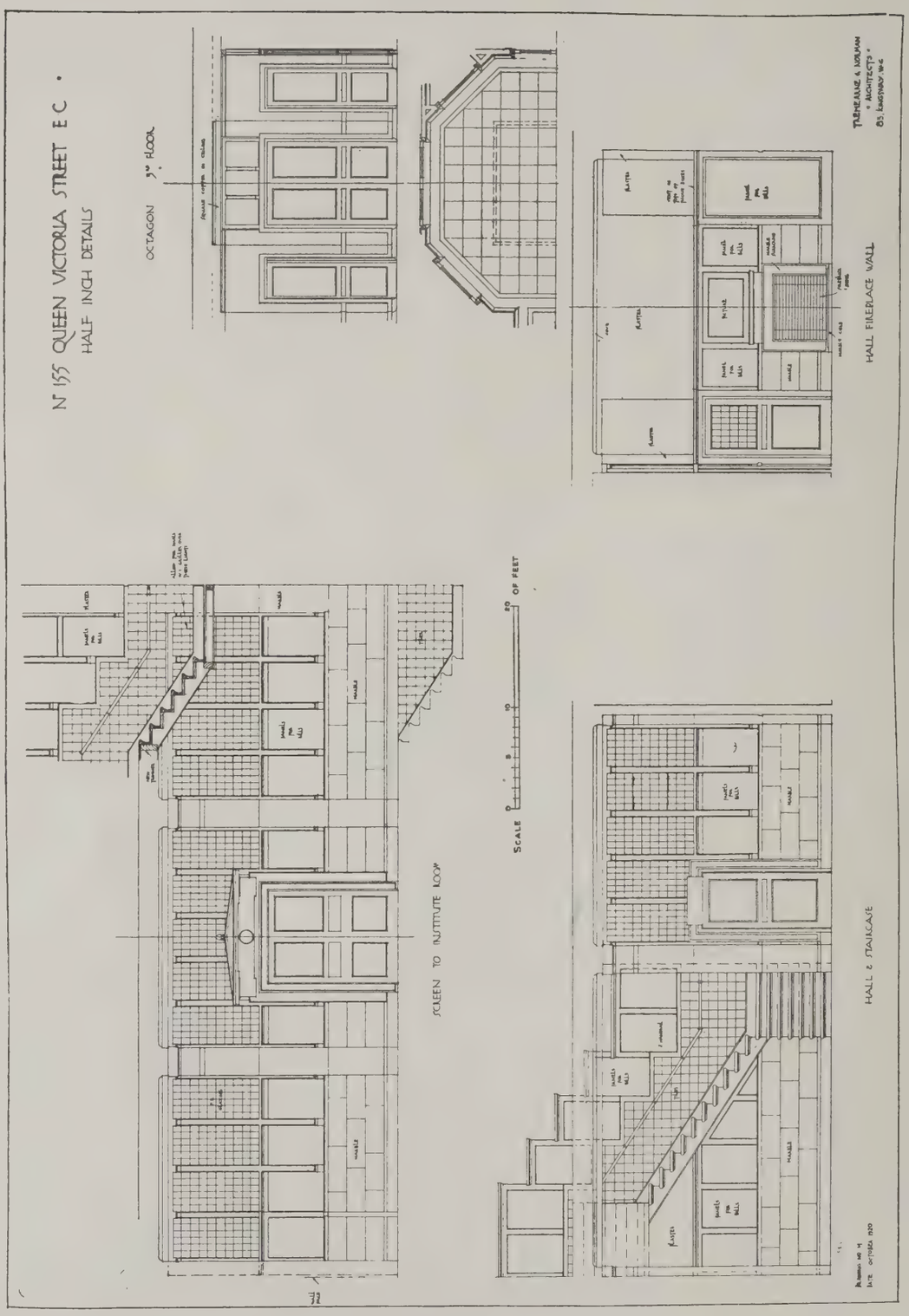
The whole of the surroundings, except the Bank of England, have since changed and all around are now lofty buildings and spacious thoroughfares. In the interim before another mart was established sales were held at the London Tavern, Masons Hall Tavern, and the Guildhall Tavern. The next mart erected in Tokenhouse Yard, from the designs of Mr. G. Somers Clarke, was acquired by the Bank of England in 1918, since when sales have been held in Winchester House. As supplying an outstanding need in the shape of an up-to-date City headquarters where sales may be held, the new mart is therefore a link between ancient and modern times.

THE LONDON AUCTION MART: A GOOD EXAMPLE OF AN OLD BUILDING RECONDITIONED. TREHEARNE AND NORMAN, ARCHITECTS.



SECTION A·A

THE LONDON AUCTION MART, QUEEN VICTORIA STREET: SECTION SHOWING RECONSTRUCTION.
TREHEARNE & NORMAN, ARCHITECTS.



THE LONDON AUCTION MART, QUEEN VICTORIA STREET: DETAILS OF RECONSTRUCTION

TREHEARNE AND NORMAN, ARCHITECTS.

It presents an extraordinary contrast o its predecessor, which cost £20,000, nd involved the company in litigation ver light and air to the extent of £25,000. 'he front measured 97 ft. in length, the uilding had a height of 54 ft., and the verage depth was 36 ft. The founda- ions were carried down to a distance of 2 ft. below the level of the street, neces- itating probably the filling in of the old Vall brook or stream.

R.I.B.A. Council Meeting

The following notes are from the ninutes of the last Council meeting of the R.I.B.A. :—

Higher Buildings for London.—The Council have discussed the report of a ommittee which has suggested the nodification of the London County Council's regulations so as to permit the rection of higher buildings in London. After careful consideration of the whole ubject the R.I.B.A. Council have arrived t the following conclusions: That any eneral increase in the height of buildings would be detrimental to the amenities f London. That the powers possessed y the County Council of permitting an ncrease of height in particular cases are dequate and are exercised in a reason- ble way. That the open spaces and vide streets of London are of great value n securing the free circulation of air, and hat their usefulness in this respect should ot be impaired by permitting the erec- ion of high buildings adjoining them. That the principle of increasing housing ccommodation by means of high build- ngs is a reactionary one and undesirable rom the point of view of family life.

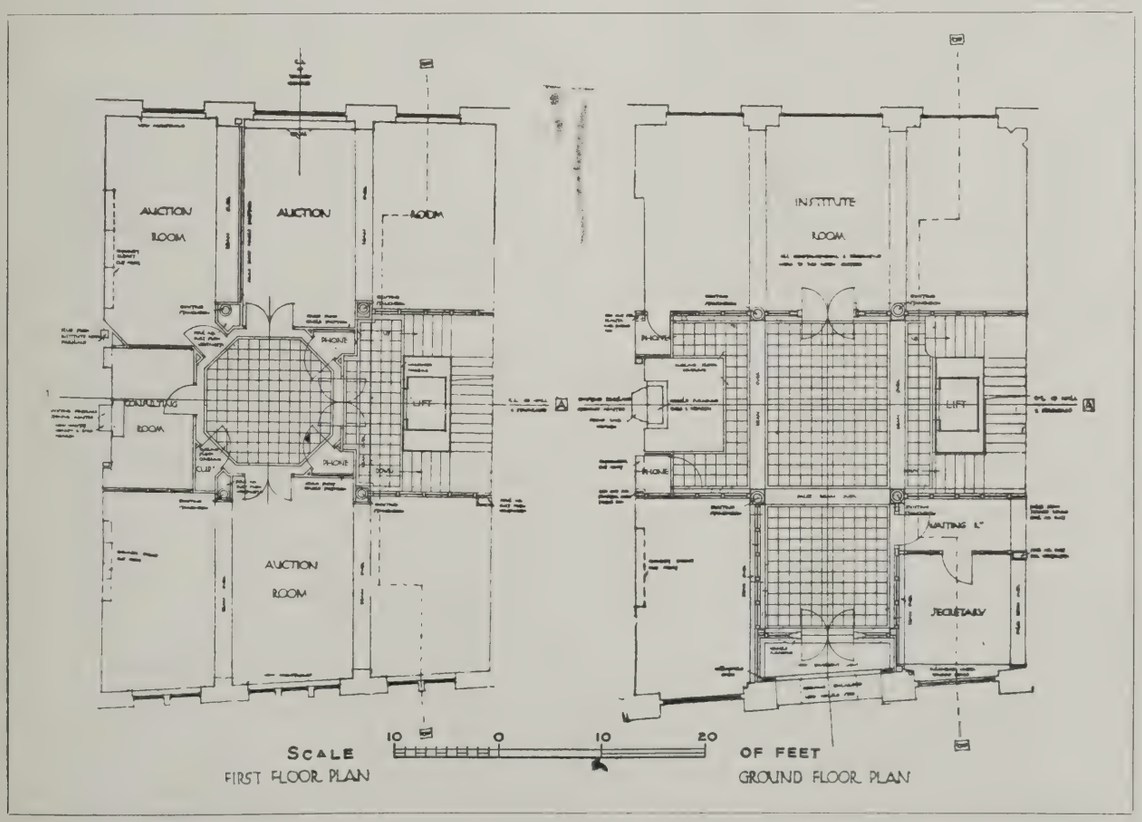
THE LONDON AUCTION MART: ENTRANCE.

That in the case of buildings which, in order to secure unity of design, are required to be of the height allowed by the Building Act the restriction of the height of the top floor to 60 ft. in those of large cubical contents is no longer necessary or desirable in view of the methods of construction and fire attack now available.

Street Architecture Award.—The following have been appointed to serve on the jury which is to make the annual award for the best street frontage completed in London: Sir Aston Webb, President of the Royal Academy; Mr. Paul Waterhouse, P.R.I.B.A.; Sir Reginald Blomfield, R.A., Past President R.I.B.A.; Mr. E. Guy Dawber, Vice-President R.I.B.A.; and the Right Hon. The Earl of Crawford and Balcarres, K.T., etc., Hon. F.R.I.B.A.

R.I.B.A. Conference, 1922.—The Council accepted the invitation of the South Wales Institute of Architects to hold the R.I.B.A. Conference in Cardiff in the summer of 1922.

The University of London.—Mr. Paul Waterhouse and Mr. Arthur Keen were



THE LONDON AUCTION MART, QUEEN VICTORIA STREET: PLANS SHOWING RECONSTRUCTION.
TREHEARNE AND NORMAN ARCHITECTS.

appointed to represent the Royal Institute on the Architectural Education Committee of the University of London.

Financial Support to Scientific Organizations.—The Council voted subscriptions to the funds of the Empire Forestry Association and the British Engineering Standards Association.

The Tottenham War Memorial Competition.—The Council endorsed the issue of the veto in regard to this Competition.

"The Designers of our Buildings."—A vote of thanks was passed in favour of Mr. L. Cope Cornford, the author of the recently published volume on the Royal Institute and its activities.

Loan of Drawings.—Votes of thanks were passed in favour of Sir Vere Isham and Mrs. Coke for the loan of the John Webb Collection and the Smithson Collection to the Royal Institute Library.

The Exhibition of American Architecture.—Votes of thanks were passed in favour of the American Institute of Architects for the loan of the drawings and photographs, to the Exhibition Committee for their organizing work, to the Hanging Sub-Committee (Messrs. W. H. Ward, H. M. Fletcher, and H. C. Bradshaw) for the effective arrangement of the exhibits, to Mr. H. C. Bradshaw for the design of the poster, and to Mr. Cart de Lafontaine for writing the Foreword to the catalogue and for his services in negotiating the loan of the exhibition.

The Late F. W. Hayes

The following appreciation has been specially contributed by the Rt. Hon. Sir William Bull, M.P.:—

I always looked upon my friend and neighbour, Frederick William Hayes, as a modern embodiment of William Blake. Like the latter, he was a man of genius in several directions—indeed, when you come to think of it, in many more branches than Blake. Like him, he was a mystic with it all; and, like him, in his lifetime he was not accorded the fame and recognition which one day I am sure will be his.

Hayes was principally a painter in oils and water-colours, but he also wrote plays—I find there are a round dozen in the British Museum Catalogue, but no copy of "Medusa," which was produced by the Kendals at the St. James's Theatre in 1882. He also wrote several novels, including an Historical Trilogy, which has been compared favourably with the best work of Dumas père. An amateur actor, I was privileged on more than one occasion to act with him. Taking a deep interest in sociological questions, he wrote many tracts and pamphlets, and is quoted as an authority by Sidney Webb in the preface to the Fabian Essays of 1920. Then again he lectured, and, an accomplished musician, he wrote songs, some of which were used in Madame Trebelli's repertoire. Upon my word, when I muse on the activities of my friend I am more than struck with the fact that he was an Admirable Crichton.

This is merely a preface to the fact that his landscapes are being shown at Messrs. Walker's Galleries in Bond Street. I want to point out they have a technical interest in addition to that which one always feels in a memorial exhibition of a well-known painter's work. The majority of them are examples of the artist's "thin-oil" paintings from nature, which only became known to the public after his death, and they indicate the great possibilities of this method of sketching which he devised. To those who for business or pleasure paint out of doors, a study of this "thin-oil" method should be particularly helpful, especially where a rapid sketch embodying a certain amount of detail is required, for it combines most of the advantages of oil and water colour without their chief drawbacks.

In these "studies" can be seen the foundation of that firm grasp of complicated foreground masses which was one characteristic of much of the artist's exhibited work; they present an amount of detail painting allied with a breadth of effect seldom to be found even in the most carefully finished production, giving a first impression of long-sustained effort. Inspection, however, shows them to have all that directness and spontaneity of touch which is so pleasing to the artistic eye, and it is a fact that, although they average about 30 in. by 20 in. in size, each one was completed at a single sitting. Even allowing for Hayes's great knowledge and extraordinary technical dexterity, it is improbable that such results could have been obtained by any other method.

His procedure was to take a sheet of white paper laid over an ordinary canvas stretcher and to size it with transparent isinglass or patent glue, this white surface being used as the highest light—as in pure water-colour. Having sketched in the lines of his subject with a hard pencil, he then washed on the main colour masses with transparent oil-colour, using turpentine very freely as the medium, much as water is used in water-colour. As the size prevents the oil from entering, this forms a sort of thin surface glaze which is quickly sufficiently set to allow being painted on, but which may be readily removed with a clean rag, leaving the original white paper. The more detailed work was then laid on this ground with rather stiffer colour, most of the drawing being done directly with the brush, and any heavy impasto which might be required was left till last to avoid having to paint into it. He thus preserved all the depth and richness of oils with the transparency of water-colour; and the "slop" of the turpentine, and free use of the palette knife in blending washes together, give the method passages of quality that have a charm peculiar to itself.

It is interesting to note that these works have lately received recognition by being included not only in most of our leading public galleries, but also in those special collections which are kept for educational purposes. Hayes had an almost uncanny eye for seeing a "picture" in Nature, and nearly all these paintings have a fine sense of balance about them; yet they are so obviously the free expressions of the artist's love of the subject untrammelled by thoughts of exhibition or sale. While he had an established position in landscape art ever since he first exhibited at the Royal Academy in 1872, these works have given him a posthumous fame as one of the greatest of painters of Nature. Do you see what I mean when I compare him to William Blake?

Law Report

Liability for Surveyor's Fe

Prusser v. Coy.

Dec. 14. Official Referees Court.
Before Mr. Edward Pollock.

In this case Mr. Daniel Robert Pruss surveyor, of 77 Bexhill Road, Croft Park, S.E., claimed from Mr. Fredk. Coy, who carries on business as estate agent at 191 Battersea Bri Road, the sum of £105 5s. as an agr fee for the preparation of plans and desi and specifications.

It appeared that in January 1920, plaintiff, at the request of the defend prepared specifications and a schedule dilapidations. He also prepared altered various designs and plans and other work in connection with premi at Ethelburga Road, Battersea.

Plaintiff alleged that it was verba agreed that defendant should pay to h for all work other than the preparat of the schedule of dilapidations an clusive fee of 100 guineas. It was, said, an implied term of the agreem that plaintiff should receive in addit to the fee of 100 guineas reasona remuneration for his services in prepar the schedule of dilapidations, which fixed at £5 5s. Alternatively, plain said, it was an implied term of the empl ment that plaintiff should receive reas able remuneration for work done services rendered, and such reasona sum, he said, would be £110 5s. In Ma and April, 1920, he at the request of defendant, did certain work and rende certain services in connection with p mises at Crescent Mansions, Nott Hill, which request was made verb and partly by letters written on bel of the defendant.

In his defence defendant admitted t plaintiff prepared the plans and desig etc., but said that the work done based upon, and made from a survey plans of the site and existing build obtained from defendant. He admitted preparation of the schedule of dilapi tions, but denied having instruc plaintiff to do it. He also denied agreement, and alleged that it was agr that he and plaintiff should collaborat the designing and erection of the buildi but plaintiff during the progress of building put it out of his power to operate by leaving the district and g to live in Hampshire. Defendant ther said that the claim was unreasona and excessive, and while generally deny liability brought into court £37, which said was more than sufficient to c plaintiff's claim.

The Referee, after hearing evide which occupied two days, gave it as opinion that the plaintiff's charges w not excessive, and he did not th defendant was surprised when he recei the account, because it appeared that had previously given an estimate of cost to his client. The charge was, said, not unreasonable, and he there gave judgment for the plaintiff £108 3s. with costs.

Counsel for the defendant asked a stay for seven days in order t defendant might consider whether would appeal.

The Referee granted the applicatio the usual terms—that the money be p into court.

New Home Office Building Regulations

DRAFT regulations proposed to be made to govern all buildings in course of construction, alteration, repair, or demolition, to which the provisions of the Factory and Workshop Acts, 1901, apply, have been issued by the Home Office. By the Factory and Workshop Act, 1901, power was given to make regulations for all premises on which machinery worked by steam, water or other mechanical power is used for the purpose of construction of a building, or any structural work in connection with a building. In 1907 a Departmental Committee was appointed by the Secretary of State to inquire into the dangers attendant on building operations and to report as to the precautions which were desirable for the safety of the workers. This committee drew up a Code of Regulations for the Industry and recommended that they should be made to apply to *all* buildings in course of construction, alteration or repair, and that the powers under the Factory and Workshop Act, 1901, should be extended accordingly. It has not so far been possible to pass the legislation required to give effect to this recommendation.

In 1919 the Joint Industrial Council for the Building Trade, at the suggestion of the Home Office, set up a Safety and Welfare Committee to consider the matter afresh in the light of more recent experience. This Committee, after conducting a careful investigation, unanimously agreed with the Departmental Committee in advocating regulations, and they submitted a code based substantially on the conclusions arrived at by that Committee but incorporating certain amendments which they thought desirable in the light of later experience and discussion. They further recommended that, in the absence of powers to deal with the industry as a whole, the proposed regulations should be put in force at once for buildings to which the existing legislation applies. This report was adopted by the Joint Industrial Council and submitted by them to the Secretary of State. The Secretary of State has decided to give effect to the recommendation of the Joint Industrial Council, and for that purpose is now issuing the proposed regulations as a draft in the first instance, in accordance with the procedure laid down by Section 80 of the Act. (As required by Section 79 of the Act), he has formally certified the construction of buildings and constructional work in connection with buildings for the purpose of which machinery worked by steam, water or other mechanical power is used, to be dangerous.

The Secretary of State hopes that, in view of the fact that they have been agreed upon by the Joint Industrial Council, the regulations will be accepted by the industry generally. If, however, objections of substance are taken to the regulations either by the occupiers or by the workpeople, or by any other persons affected, the objections will, under the Statute, be the subject of full inquiry by a competent person appointed by the Secretary of State, and the report of the person holding the inquiry will be considered by the Secretary of State before the final regulations are made. At the inquiry, employers, owners, occupiers, and workpeople, and all others concerned will be entitled to a full hearing. If, therefore, any person desires the regulations to be further considered, he should lodge objection in accordance with Section 80 of the Factory and Workshop Act, 1901. Any objection with respect to the draft regulations must be sent to the Secretary of State before January 18. Every such objection must be in writing, and must state (*a*) the draft regulations or portions of draft regulations objected to; (*b*) the specific grounds of objection; and (*c*) the omissions, additions, and modifications asked for.

The draft regulations are as follows :—

Duties.

During the construction, alteration, repair, or demolition of any building, all contractors and employers of workmen shall observe Part I of these regulations. It shall be the duty of all persons employed to observe Part II of these regulations.

Part I.—Duties of Employers.

1. Suitable scaffolding plant shall be provided for workmen where necessary. All scaffolding and appliances connected therewith shall be of sound material and of adequate substance. The parts thereof shall be examined before use as to strength and suitability, and if found defective shall be repaired; or if not capable of repair, shall not be used as scaffold plant.

2. Sufficient material shall be provided for, and shall be used in the construction of scaffolds, and when in place shall not be removed until the part to be removed is no longer required for working purposes, stability, or safety.

3. Pole standards and the legs of gabbard scaffolds shall not be fixed more than 10 ft. apart, and shall be vertical; the ledgers shall be level, and the whole scaffold shall be sufficiently and properly braced. Gabbard scaffolds, frames, standards, or other appliances used as supports for working platforms shall be of sound construction, and shall have a firm footing, and be adequately secured, strutted, and braced. The legs and needles of gabbard scaffolds shall be securely bolted together.

4. Working platforms more than 5 ft. from the ground or floor shall be closely boarded or planked, and shall be at least 45 in. wide; and no working platform of pole or gabbard scaffolds shall be less than 5 ft. from the top of the standards, except where impracticable. Platforms on which stone is dressed or roughly shaped shall be at least 72 in. wide, and of a thickness of at least 2½ in.

5. Boards or planks forming part of a working platform or run shall be supported at proper distances and near each end by a putlog or other support. Boards of 1½ in. thickness shall not project more than 6 in., and planks of 2½ in. thickness shall not project more than 12 in. beyond the end support. Boards or planks forming part of a working platform shall not overlap each other.

6. All gangways and runs shall be at least 27 in. wide when any part is more than 5 ft. from the ground or floor. The planks forming a gangway or run shall be so fixed and supported as will prevent undue or unequal sagging. When the slope renders additional foothold necessary, proper stepping-laths the full width of the gangway at suitable intervals, but not exceeding 2 ft., shall be provided.

7. Loose bricks, drain-pipes, chimney-pots, or other unsuitable material, shall not be used in the formation of or for raising the levels of scaffolds, runs, or gangways.

8. Working platforms, gangways, or runs shall not be used for working upon until the construction of those parts is completed and the safeguards required by these regulations properly fixed.

9. Where a scaffold has not been erected by or under the superintendence of the employer whose workmen are to use it, the said employer, before allowing work to proceed thereon, shall satisfy himself, either personally or by his agent, that the scaffolding is in a stable condition, and that the materials used in its construction are sound, and that the required safeguards are in position, and he shall be responsible for the same so long as his workmen continue to use it.

10. Scaffolding in use shall be examined once a month by a competent person deputed by the employer responsible for the scaffolding, who shall make an entry in the prescribed register to the effect that he has examined the scaffolding and its fittings and connections, and showing the result of his examination with the steps taken to remedy any defect which may have been found.

11. Working - places and approaches thereto shall be efficiently lighted.

12. Gangways, runs, and staircases shall be kept free from obstructions, and if over 12 ft. from the ground, shall be provided with a hand-rail, or a taut rope or chain.

13. Every working platform more than 12 ft. above the ground, gantry, or floor, shall be provided on the side away from the wall, and at each end with : (*a*) Continuous guard rails, not less than 3 in. by 2¼ in. of deal or of equivalent section or strength, fixed at a height of 3 ft. 6 in. above the scaffold boards (except where continuous edgers are fixed in advance at a height not exceeding 4 ft. 6 in. above the platform, measured to the top of the ledgers); and (*b*) continuous guard boards of sufficient height (but not less than 18 in. above the platform) to prevent material falling from the scaffold; except where access is required for workmen or material.

14. Poles used for scaffolding shall have the bark stripped off.

15. Putlogs shall be securely fastened, and at least two-thirds of the original number supporting each platform or scaffold shall remain in position until the scaffolding is finally removed. This shall not apply to working platforms at 12 ft. or less from the ground or floor.

16. Poles, planks, ropes, or other materials, shall not be thrown from a scaffold, floor, window, or other opening over 20 ft. above the ground, but shall be properly lowered.

17. While work is being done on the roof of a new building, or while extensive

repair (such as stripping, trimming, or inserting spars or rafters, re-slating near the eaves, or renewing gutters) of a roof is proceeding, there shall be a suitable outside working platform not more than 30 in. below the eaves, except where there is a parapet wall. This platform shall be at least 45 in. in width and be provided with strong continuous guard-rails at a height of 3 ft. 6 in. from the platform and with guard-boards of a height of at least 18 in. from the platform. This regulation shall not apply to roofs the eaves of which are less than 20 ft. from the ground.

18. For work on the outside of the slope of a roof, scaffolding shall be constructed with proper framed brackets or cripples suited to the slope of the roof, and suspended from the ridge or rafters by scaffold cords of ¾ in. diameter, or by wire ropes. The working platform on these brackets shall be of planks not less than 9 in. by 1⅜ in., with bearings not more than 6 ft. apart, or of a thickness of ¾ in. with a continuous bearing. In addition a sufficient quantity of double step roof ladders or duck ladders or crawling boards properly secured, shall be provided. Such crawling boards shall not be less than 9 in. by 1⅛ in., with stepping laths of 1½ in. by 1 in. securely fixed at convenient intervals. The suspending ropes shall be securely fastened by means of pins or bolts not less than ⅝ in. in diameter, bolts being provided with a wood screw end for screwing into the timber and a proper eye for receiving the rope. Scaffolds shall not be supported by cast-iron eaves gutters.

19. Cantilever or jib scaffolding shall be constructed of strong bearing timbers, or steel joists, securely fixed and anchored from the inside, and of sufficient length to ensure stability, and shall also be properly braced and supported.

20. Every working platform erected on trestles (except painters' trestles) shall, where the trestles are 5 ft. or more in height, be of a width of at least 45 in., and where the trestles are of less height than 5 ft., shall be of a width equal to the height of such trestles. Trestle scaffolds of more than three tiers and exceeding 15 ft. above the ground or floor shall not be used.

21. When bedding or fixing door or window frames, a floor or platform shall be provided to enable workmen to perform their task without danger to themselves or those below them.

22. On every suspended scaffold not exceeding 10 ft. in length, the platform shall be at least 18 in. wide, and of adequate thickness. Such scaffolds exceeding 10 ft. in length shall be of proportionate strength. There shall be at least two supporting fibre ropes of good quality of ¾ in. diameter, or wire ropes, or iron hangers of equivalent strength, for every two men on such scaffold, and continuous guard-rails shall be provided, securely fixed at a height of 3 ft. 6 in., and also a continuous guard-board not less than 4 in. above the platform. Trestles or other means of increasing the height shall not be used on suspended scaffolds. When a skip or large basket is used as a suspended scaffold for one man, it shall be not less than 2 ft. 6 in. deep; and shall be carried by two strong iron bands properly fastened and continued round sides and bottom, with eyes in the iron to receive the ropes. Platforms resting on wooden bearers let into the wall at one end without other support shall not be used unless the bearers go right through the wall, are securely fastened, and are of sufficient strength. Figure or bracket scaffolds fixed by iron dogs or spikes driven into the wall shall not be used.

23. Planks supported by ladders, steps, or folding trestles, shall not be less than 9 in. wide and 1½ in. thick, and shall not exceed 9 ft. bearing. Where steps are used, the platform shall not exceed 7 ft. in height.

24. Ladders used as a means of communication in, on, or about a building under construction or repair, shall rise at least 6 ft. above the place of landing, shall not be raised on bricks or other loose packing, but shall have a level and firm footing, and shall be securely fixed so that they cannot move from their top point of rest, and if of more than 40 rungs shall be stayed in the centre of length. Ladders which cannot be secured at the top, shall, if over 25 ft. in length, have a man stationed at the foot to prevent slipping, or shall be securely fastened at the base. A ladder having missing or defective rungs shall not be used. Ladders made of sawn timber shall not be used unless of adequate strength and the steps securely notched in or housed.

25. Openings left in the floors of buildings or working platforms for elevator shafts, stairways, or for the hoisting of material, or for access by workmen, or other purposes, shall be securely fenced by guard-rails 3 ft. 6 in. in height, and by guard-boards at least 7 in. high, or be completely covered with planking.

26. Each floor of the building, below which workmen work or pass, shall be covered in such a manner as to be an efficient protection to the men beneath.

27. The stage for every crane shall be built of sound material, shall be of good mechanical construction having regard to its height and the lifting and reaching capacity of the crane. The crane shall be securely anchored to a solid foundation. The platforms for the driver and signalman shall be of sufficient area, close-planked, securely fenced, and provided with safe means of access.

28. The working gear of cranes, crabs, and all hoisting apparatus and anchoring appliances, and all bolts and cotters shall be easy of access for inspection; the working gear shall be kept in good repair and working order and shall be cleaned and examined at least once every week. The results of this examination shall be entered in the prescribed register. The ropes or chains shall be securely fastened to the barrels.

29. Every crane shall be provided with proper brake-power, and shall have the safe load plainly marked upon it. No crane or gear shall be loaded beyond the safe load. No load shall be left suspended from a crane unless there is a competent person actually in charge whilst the load is so suspended. The lever controlling the link-motion reversing gear shall be provided with a suitable spring-locking arrangement. Every type of hoisting machine, tackle, or apparatus, and the appliances connected therewith, shall be of good mechanical construction, sound material, and of adequate substance, and shall be properly and securely fixed and of suitable strength.

30. Chains used for hoisting purposes shall have been tested, shall be annealed once a year, and shall be examined by a competent person every three months. The safe load indicated by the test, and the date of last annealing, shall be entered in the prescribed register kept on the premises.

31. Crane drivers shall be properly qualified men. No person under seventeen years of age shall be employed to give signals to a crane driver.

32. Signals for hoisting shall be such as can be readily heard or seen, and shall be distinctive in their meaning to the person who has to act upon them. Where a sound signal is used, the signal shall be made by an efficient gong, whistle, or electrical apparatus. The signal wires shall be protected from accidental interference.

33. Boxes used for hoisting bricks or other loose material shall be closed in on the four sides. One or more of the sides may be hinged.

34. Proper safety or spring hooks only shall be used when hoisting barrows, or buckets, or baskets; the last-named shall be of a type not depending entirely on the handles for support.

35. Rails on which travelling cranes are run shall be of uniform section, shall be secured by fish-plates, and shall be securely fastened to sleepers.

36. The flywheel of every engine, all dangerous parts of the machinery, every part of the mill-gearing, the electrical conductors and switches, shall be securely fenced, or be in such position or of such construction as to be equally safe to every person employed as they would be if they were securely fenced. Water-gauge glasses on steam boilers shall be adequately protected by a guard.

37. In all excavations—except in rock—necessary timber struts, walling planks, and boards, shall be provided and used; and in works of underpinning, the adjacent walls and ground shall be properly shored and strutted.

38. Washing conveniences shall be provided for the use of painters and plumbers, with a sufficient supply of water, soap, nail-brushes, and towels, and at least one bucket or basin for every five persons.

39. Painters or plumbers shall not take their meals, or deposit clothing put off during working hours, in the paint-mixing room or the plumbers' shop.

40. Rubbing down or scraping of painted surfaces containing lead shall, where practicable, be done by a moist method.

Part II.—Duties of Workmen.

During the construction, alteration, repair, or demolition of any building, the workmen who use any gangways, working platforms, scaffolds, trestles, gabbards, ladders, cranes, machinery, or other appliances, shall observe Part II of these regulations.

41. They shall co-operate with the employers in carrying out Part I of these regulations, and shall report to the employer or foreman any defect they may discover in the plant or appliances.

42. They shall not interfere with, take away, or destroy any of the plant, or safeguards required by these regulations, without the authority of the employer or his responsible foreman.

43. They shall not be carried by the cranes (except on the driver's platform) or ride in barrow hoists, or hod hoists, or adopt other unsafe means of getting about

building, but shall use the gangways, lers, or staircases provided for the pose.

4. Painters and plumbers shall care- y clean and wash their hands before ing the premises or partaking of l, and shall not partake of food in the nt-mixing shop or plumbers' work- p.

5. Suitable overalls shall be worn by nbers and all persons employed at ing or using paints or other material taining lead or lead compounds, and ll be washed once a week. The over- shall not be worn at meals.

Correspondence

How to Revive Public Confidence in Building

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The question of restoring public fidence in building has been in my id for some time.

One knows that prices have come down ing the last few months, but my erience is that clients are waiting in belief that prices will drop even lower. ne materials, such as bricks, cement, ., are to-day too high in price, and il these are reduced it does not seem to that prices are likely to be much lower he near future.

The building public should be con- ced that nothing is to be gained by iting, and that it is to their advantage place work now rather than later on, en the building trade will be busier, h a likelihood of prices hardening ing to increased demand.

f contractors would make it known t they are willing to undertake work h only a small margin of profit in order find employment for a large number of n, and at the same time quote firm ders for the work, I think that things uld improve.

At the same time steps should be taken get manufacturers to increase output l also reduce prices.

WM. E. A. BROWN.

Architects and House Building

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The unfortunate experiment, on which the Government has been gaged, of nationalizing a huge and portant trade has now been suspended, d it is time to take stock of the position fore the house builder gets to work in l earnest. So soon as a house can be ilt as an economic proposition, when rental value shows an adequate return the cost, there will be an immense rival of house building by private terprise, and it is highly desirable that houses which will spring up in all ections should be an improvement on those of the past.

I do not think anyone should condemn, t and branch, all the pre-war houses. know it is quite in the mode to do so, but when one realises that half the people live in houses over fifty years old and that during that time the standard of living has materially changed, it is evident that some discrimination is due in condemning the pre-war house. The houses which were built fifty years ago, before the Franco-German War, were, I have no doubt, good ones according to the times, but they are not good ones now, and should be decently and reverently pulled down. The houses which were built during the ten or fifteen years before 1914 are usually very convenient and comfortable dwellings. They might have been more beautiful, and they would have been if it had been possible for house builders to have worked hand in hand with good architects, but when you have to produce a house which a rent of three shillings a week will return a commercial interest upon, you have no margin for beauty if it is going to increase the cost. The whole gamut, from the builders' labourer to the master house builder, were the victims of low rents, and the business was an undignified struggle for cheapness. Never again do we want to return to pre-war rents.

The houses of the people should be one of the standing monuments of the education of the people in things good and true. The other day I was being driven through a squalid slum in Liverpool and I caught a passing glimpse of a drinking fountain with a graceful bronze figure well and boldly designed, and it seemed to me like a jewel in a rubbish heap. The contrast between the monotonous dilapidated old buildings, which formed the homes of the people, and the beautiful little monument was very striking. There is no reason, except low rents, why the homes of the people should be so dull and depressing. Our houses can be made into a powerful influence in the uplifting of the people, and if proper rents can be obtained, the architect will have to do it. It is not a matter of great cost; the people do not require villa residences such as we sometimes see, and which with flamboyant expensiveness written all over them remind one of Jip's pagoda. They want the dignity of proportion and beauty of outline. One frequently sees houses which were designed by artists, satisfying and beautiful, and those are the houses which are wanted for the people and which the house builder will gladly erect if he can get his architect to prepare his design with a view to economy as well as artistic merit.

During the past few years very great strides have been made in the organizing of the house-building trade, a central body has been formed, and its influence will be felt in drawing together the house-builder and the architect in order that one of its main objects can be accomplished in improving the housing of the people. The National Federation of House Builders is now four years old, and the recently formed London House Builders' Association is its latest organization. There are branch associations in various parts of the country, and for the first time the house-builder can speak with one voice, and the first cry is for something better in houses.

NORMAN MCKELLEN,
Secretary, National Federation of House Builders.

The Week's News

More Houses for Bexhill.

The U.D.C. propose to erect thirty more houses.

New Reservoirs for Halifax.

The Halifax Corporation Bill provides for the construction of new reservoirs in the parish of Heptonstall, at a cost of £585,000.

Proposed New School for Ossett.

Ossett Education Committee are apply ing to the Board of Education for sanction to a loan of £10,500 for the erection of a new school.

£105,000 Baths for Paddington.

A scheme for the erection of baths and washhouses in Porchester Road, Bayswater, at an estimated cost of £105,000, has been approved by Paddington Borough Council.

£750 Houses for Hull.

The Hull Corporation Health Committee has decided to build houses independently of State aid. The scheme approved comprises seventy-four houses at an estimated cost of £55,000.

A New Art Gallery for Hull.

The scheme for erecting a new art gallery is to be proceeded with. The scheme had been interrupted by the war. The committee have now decided that preliminary steps be taken to secure competitive designs.

Royal Sanitary Institute Conference.

Major-General The Rt. Hon. J. E. B. Seely, C.B., C.M.G., P.C., D.S.O., M.P., has consented to accept the office of President of the Thirty-Third Congress of the Royal Sanitary Institute, to be held at Bournemouth from July 24 to 29, 1922.

New Architectural Partnership.

Messrs. Keith D. Young and Alner W. Hall, FF.R.I.B.A., are taking into partnership, as from January 1, Mr. Francis J. Humphry, A.R.I.B.A. The name and address of the firm will remain as now, viz.: Young and Hall, 17 Southampton Street, Bloomsbury, W.C.1.

Blackpool's New Development.

Blackpool's municipal leaders have called in Mr. T. H. Mawson, the town-planning expert, who is to be given a free hand in the further development of the promenade from its present terminus at South Shore to the boundary at Squire's Gate. It is known that a great bathing pool is to be included in the scheme.

Canadian Hospital Extension.

A considerable hospital extension is to be effected in Western Canada next spring. The architect for the buildings is anxious to obtain as much material as possible from the United Kingdom. Manufacturers and exporters may obtain further particulars from the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.

Victoria and Albert Museum.

The Sheepshanks Galleries, containing the paintings of the Sheepshanks, Constable, and other collections in the Victoria and Albert Museum, have been reopened to the public. Owing to the occupation of the Galleries as Government

offices during the war, and to subsequent alteration and redecoration, these rooms have been closed since December 1914. The paintings have been re-arranged, and include several new works received by bequest, notably two portraits by Raeburn and three landscapes by De Wint.

Scheme to Improve Barry Island.

The Barry Urban District Council has applied for sanction to borrow £21,000 for the construction of a promenade, sea-wall, shelter, and shops at Whitmore Bay, Barry Island.

Institute of Scottish Architects.

At a meeting of the council of the Institute of Scottish Architects it was intimated that the petition for a Royal Charter was fully completed, and would be lodged with the Privy Council at an early date. With regard to housing fees, a representative was appointed to meet the Practice Committee of the R.I.B.A. in London and submit the views of the Scottish architects.

Wages in the Building Trade.

An agreement, it is understood, has been reached in regard to the wages of building trade operatives, and has been incorporated in a memorandum of the Wages and Conditions Council relating to working conditions. The entire proposals have been circulated to the branches of the Operatives' Federation, for ratification, and the result is to be reported to the Wages and Conditions Council, which meets in London on Jan. 12 and 13.

London's New County Hall.

At a meeting of the London County Council, Mr. H. J. Greenwood said that the question of proceeding with the northern extension of the new County Hall would be considered by the Establishment Committee early in the new year, but before the extension could be built it would be necessary to rehouse part of the tramways staff now on the site. Without the extension it would not be possible to house the whole of the Council's staff at the new County Hall.

Greenwich Improvements.

Greenwich Council have resolved, subject to a grant or grants of 65 per cent. of the interest and sinking fund charges being received from the Unemployment Grants Committee, to apply for loans to cover the following expenditure: £6,000 provision of new accommodation for disinfecting purposes, isolation shelter, and necessary both accommodation, etc., together with caretaker's apartments; £30,000, cost of installing proposed refuse screening and disposal plant at Tunnel Avenue depot; £6,000 and £2,000, cost of altering the lending department at the central library from a "closed library" to an "open access library," and cost of fittings respectively.

Tokio Peace Exhibition.

The Department of Overseas Trade is in receipt of information from the Commercial Counsellor of His Majesty's Embassy in Tokio (Mr. E. T. Crowe, C.M.G.) regarding the forthcoming Peace Exhibition which is to be held there from March 10 to July 31, 1922. The Commercial Counsellor states that this exhibition may prove a good opportunity for showing new British goods, and he recommends British firms to make a small exhibit. It would appear that all the space available for foreign exhibits has been over applied for. Messrs. Arthur Buckney & Company, of Tokio, have, however, secured a special site for the erection of a British pavilion, and intending exhibitors can obtain space therein on application to the London Office of the firm at 40 Westminster Palace Gardens, Victoria Street, S.W.1. Rebates of freights on goods for exhibition have been arranged by Messrs. Buckney, ranging from 20 per cent. to 50 per cent., according to date of shipment. Intending exhibitors should lose no time in communicating with Messrs. Buckney, who are prepared to arrange all details, supply attendant staff at Tokio, and safeguard exhibitors' interests in every possible way.

Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided housing schemes in Scotland up to November 30, 1921: permanent houses completed, 4,115; temporary houses completed, 610; reconstructed houses completed, 67; houses built under the private subsidy schemes, 1,140; making a total of 5,932. In addition, there are 13,926 under construction, of which 2,094 are being built with the aid of the Government subsidy to private persons. The total amount paid out by the Scottish Board of Health in respect of the 1,140 houses completed under the private subsidy schemes is £275,303 6s. 8d. Special progress was made during November. During the month 873 additional houses were first occupied or made ready for occupation, compared with 593 during the previous month. In addition, 499 houses were brought to the stage of having the painter work completed, so that these houses will also be ready for tenants at an early date.

R.I.B.A. Examinations.

The R.I.B.A. have published a short pamphlet containing advice to candidates for the R.I.B.A. Examinations, together with a list of books recommended to those who are studying architecture. This pamphlet contains some extremely valuable information, and it may be obtained free on application to the R.I.B.A. The R.I.B.A. are also publishing periodically the questions set at past Intermediate and Final (or Special) Examinations. Those questions set at the examinations held in June 1921 are now ready, and copies may be obtained at the Royal Institute, price 1s. 6d., exclusive of postage. Past questions are always of the greatest possible value to candidates who intend sitting for examinations; they are excellent guides as to the lines upon which candidates should proceed in preparing themselves.

Flood Lighting at a London Store

A complete system of flood lighting has been installed on the first section of the new Selfridge Building in Orchard Street, London, W. In the accompanying view, taken at night, the architectural treatment of the building is extremely well depicted. The way in which the details of the columns and cornices are thrown into relief is particularly striking. The flood lights consist of a solid copper body lined with sectional parabolic reflectors of mirror glass, and equipped with 400-watt Osram gas-filled projection-type lamps, with specially concentrated filaments. The installation was designed by the illuminating engineering department of the General Electric Co., Ltd., of Magnet House, Kingsway, and is the first example of flood lighting as applied to large London stores.

FLOOD LIGHTING AT A LONDON STORE.

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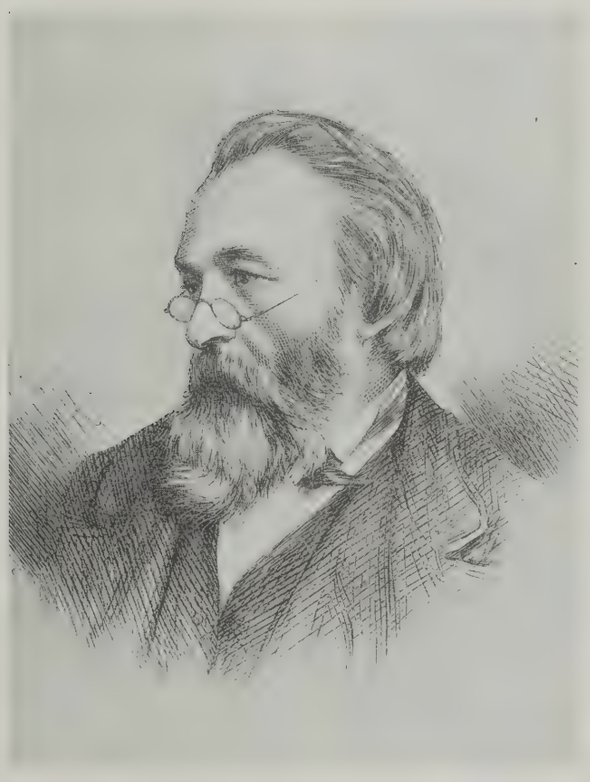
With which is incorporated "The Builders' Journal"



OWEN JONES (1809-1874).

The fame of Owen Jones rests chiefly on "The Grammar of Ornament," which he published in 1865—a book which had a great vogue in its day. He also published "Plans, etc., with Details, of the Alhambra," in 1836-45; "Designs for Mosaic and Tesselated Pavements," in 1842; and "An Apology for the Colouring of the Greek Court at the Crystal Palace," in 1854. Amongst his executed works are the decorations for the Hall of the Fishmongers' Company, decorations for the Exhibition of Industry of all Nations in 1851, and decorations for the Crystal Palace. He also designed furniture.

27-29 Tothill Street, Westminster, S.W.1.

Architectural Details. 16.—Decorations by Percier and Fontaine

This strikingly ornate example of the skilful adaptation of ancient classic details to modern design is preserved in the Louvre, and illustrates the excessive elaboration to which Percier and Fontaine occasionally lent themselves. It is of peculiar value as a study in elegant patterns deftly placed; but because of the too lavish employment of enrichments, the composition as a whole is

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Notes and Comments

Registration and Unification

CONTROVERSY on such a momentous subject is to be welcomed as a means of arriving at a sound basis of agreement, provided the argument is conducted without rancour and entire fairness, as we have no doubt it will be. Arthur Keen rightly objects, however, to the statements, in a letter which was printed in our issue of December 921, and was signed by Mr. George Hubbard and Mr. S. Cross, that "in the vain hope of obtaining Unifica- a considerable section of the members of the Institute anxious to take the momentous step of throwing open oors of the Institute to 'All Architects of the United dom' without test or examination," and that "this bracing policy of 'Unification' has met with the val of the Council." To these assertions Mr. Keen, g as hon. secretary of the Institute, gives a point- denial. There is no question, he declares, of admitny but qualified men, and the allegation to the con- he thinks "almost too grotesque to be taken seriously." host, but not quite; for, unfortunately, experience s that no statement is too grotesque to be taken sly, even among educated and intelligent men. s Mr. Keen quite justified in attributing insin- to the writers of the letter? They may be sincere h while making a very strange mistake. One ound to believe that their protest was made in good however ill-founded it may be, and however injurious ct may be on the chances of Unification and Registra- Hence Mr. Keen's challenge, "Is it 'cricket' for them eavour to convey by means of the Press the impres- nat the R.I.B.A. proposes to admit without test or nation all who apply?" Messrs. Cross and Hubbard o doubt promptly disclaim any intention of scoring y; and Mr. Keen's letter, caustic as it is, will never- serve an excellent purpose if it draws from gentlemen an emphatic disclaimer of any desire to the project of Unification and Registration.

ainly Mr. Arthur Keen does well to be angry at any ed misrepresentation of the facts, whether or not isrepresentation may turn out to be based on genuine derstanding, for it is perfectly clear that the letter by Mr. Cross and Mr. Hubbard will have the effect r. Keen attributes to it. Their letter will do much irm a false impression—one of those elusive mis- tions it is always so difficult to nail down. That it together erroneous impression makes but little differ- its injurious effect, and Mr. Keen has properly seized ortunity for repudiation. That the contention is olitic as it is untenable will not weigh with prejudiced norous members of the profession, whose fears are more easily aroused than allayed. "If," they will "it is not the intention of a considerable section of mbers of the Institute to throw open the doors of the te to all architects of the United Kingdom without examination, why should distinguished members . Cross and Mr. Hubbard allege that it is?" That estion to which Mr. Cross and Mr. Hubbard should reply; and we think that they will not hesitate to confess quite candidly and explicitly that they have accidentally misinterpreted the scope and import of the proposals with respect to the admission of members under Registration. That such misinterpretation was wilful, we cannot conceive; but it has certainly occurred, and, like Mr. Keen, we fear that it may misinform the comparatively thoughtless—may create among them a false impression as to the immediate effect of Unification and Registration, and spread and confirm certain erroneous notions as to the attitude and intentions of the Institute's Council.

It is, of course, the Council, and not what Mr. Cross and Mr. Hubbard assume to be "a considerable section of the members of the Institute," that Mr. Keen defends so faithfully and so ably, if a trifle irritably; the Council being a concrete and definite entity, while "a considerable section of the members" is but a vague and elusive phrase. It is a phrase of ill omen. Where the object is unity, there should be no "considerable section" of malcontents. For Mr. Keen says truly that we shall never get Registration unless we can go to Parliament with the solid backing of the whole Profession. It would be well, then—nay, it is an indispensable condition—that little superficial differences were at once settled out of hand, and outbreaks of internal bickering promptly suppressed, lest they grow to dangerous dimensions. Unity is essential to Unification.

Sheffield Cathedral

It is stated that Sheffield Cathedral will cost no more than £250,000. Sir Charles Nicholson's designs will incorporate parts of the old parish church, which was rebuilt in or about the fifteenth century, and early in the sixteenth century the fourth Earl of Shrewsbury added a chapel that contains several interesting monuments. Sir Charles Nicholson's course is, therefore, to some extent prescribed for him. It would be infinitely preferable to see him given a free hand. From so eminent a church architect we should then get something really great; but, as it is, the small cost and the existing church forbids any rivalry of Sheffield with Liverpool. The architectural interest of the scheme centres, therefore, in the solution by so skilful an architect of so delicate a problem in cathedral building. He has been set a difficult task, from which, however, the pupil of J. D. Sedding, and the author of so much fine church work, including scholarly restorations in Wells and Lincoln Cathedrals, is certain to emerge triumphant. By the way, it is of interest to note that Sir Charles was one of the five architects selected for the final competition for Liverpool Cathedral.

Dear Bricks and Cheap Substitutes

Concerning the prices of bricks, we are disposed to agree with the correspondent who charges the Government with a fatuous attempt to foist its bad bargains in bricks on the long-suffering ratepayer—in the ratepayer's interest. Such an excuse is as impudent as it is absurd. Worse still, it is injurious. It sets brick prices too high, thus inflating the market rates, brickmakers being only too willing to follow so illustrious an example of profiteering. Ultimately the brick trade may suffer irretrievable damage through follow-

ing the Government's false lead in a business in which it never ought to have meddled; for, as an architect correspondent remarks in the present issue, bricks are being largely superseded by substitute materials; such, for instance, as the hollow building blocks described by another architect, who records on the same page his own personal practical experience with such blocks. Clearly, therefore, the State's dealings in bricks are inciting the brickmakers to inflict a permanent injury on their industry. Further, a Government department that compels a local authority to buy State-owned bricks at an inflated price is adopting tactics that are not plainly distinguishable from those of the "rings" it is being urged, and is showing some disposition, to prosecute. Hence, probably, its reluctance to take that righteous course : it would not itself go into court with clean hands and a clear conscience.

The West Hartlepool Fire

The huge fire at West Hartlepool, which drove more than a thousand persons from their homes, surely points a moral in town-planning. It is recorded that the fire began "in an eight-acre pit-wood storage ground," where "huge piles of railway sleepers and acres of stacks of pit-wood were rapidly involved and soon demolished." Around this storage ground were clustered many working-class dwellings—a very convenient arrangement, no doubt, for the owners of the yard, for the workers in it, and, casually, for the fire fiend. In a rational system of town-planning, however, an accumulation of combustibles would not be tolerated in the midst of an aggregation of dwellings. But little prescience was required to foresee such a calamity as that which has unhappily occurred. True, under present conditions, great fires generally coincide with high winds, and it is almost equally impossible to prevent either; but with improved facilities of traction and transit, it is no longer unreasonable to demand that the storage of acres of inflammable stuff should be in every instance conducted at a safe distance from a centre of population. After the dire calamity at West Hartlepool, what to the scoffer at "town-planning fads" may have seemed nothing better than fantastical theory must now appear as a common-sense measure of precaution, as economical as humane. But there should be no further need for such practical demonstration as that at West Hartlepool.

Analysing Housing Costs

A "Graphical Analysis of the Cost of Cottage Building" is to be issued by the Department of Scientific and Industrial Research. It will mainly consist of diagrams showing the rise and fall of costs for materials and labour in Britain and in America. In Britain, it is interesting to learn, the cost of completed buildings reached top height in August 1920, and remained at the same high level until the following March or April, when it began to fall rapidly. By the end of July 1919 shipping freights for timber had got up to 450 per cent. above the pre-war figure, but by July 1921 they had come down to less than 50 per cent. above that standard. Certain materials, however, as bricks, limestone, lead sheets, tiles, having shown no sympathetic decline, have excited the special curiosity of the Scientific Researchers, whose investigations and conclusions on this phenomenal and unnatural behaviour are likely to create conditions that will not conduce to the health of profiteers.

"Back to the Road"

A series of special articles under this heading in "The Times" will give railway directors furiously to think. Motor vehicles of several descriptions are competing seriously for both passenger and goods traffic. This new movement implies more than the lowering of fares and freights. Not only will the builder and the builder's merchant get their materials carried at reasonable rates, but, for this reason and for some others, the building conditions of the country-side are likely to see considerable changes. The country house and the country inn will be differently designed and differently situated. Motor-road vehicles seem about to d for the railways pretty much what the railways did for t stage-coaches—render them obsolete. But whereas t railways could not be started without cutting up t country, the motor traffic will merely cut up the roa setting the road engineer fresh problems in constructio and compelling a more equitable adjustment of the charg for maintenance.

The Victoria Tower

Renovating the Victoria Tower of the House of Co mons appears to be a costly business, for the work is s to have been stopped for want of funds, which seems u believable. What would have scandalized Lord Gri thorpe even more had he lived to see the *impasse* in t absence of hands from one of the dials of "Big Ben," ov which he was wont to watch like a father, although it to its name from another—to wit, the late Sir Benjan Hall, who was First Commissioner of Works when t clock was installed. Although the name was prope bestowed on the great bell on which, when all is well, t hours are struck, it now popularly includes the clo itself. The bell weighs thirteen tons, and has in it a fl or crack, which was filed open for the prevention of shr ness of tone. The clock tower is 318 ft. high, and t clock, whose four dials are each 23 ft. in diameter, occup five hours in the winding-up of its striking parts. Ba Grimthorpe was certainly a skilful and scholarly horo gist, and knew as much about locks as he did about clo —which was "everything and a little more"—but foible was omniscience; and from his "Book About Bui ing," in which he slated without mercy or discriminat both architects and builders, and still more strikingly fr his ludicrous and lamentable adventures in the "resto tions" of St. Albans, it become abundantly evident t his opinions on the subject were superficial and unsound

Colonel Inigo Jones !

Jones ! *Nomen clarum et venerabile !* More especia when attached thereto is the magical and immortal Ini With how pleasurable a thrill one saw the other day, i newspaper paragraph, the name of the Father of Engl architecture—Inigo Jones ! Prefixed to it, however, the honourable title of Colonel. Two men were sent prison for cutting down trees on the estate of Colo Inigo Jones, an injury from the like of which his illustri name should have preserved him for all time; for whet he gat it by inheritance and descent direct or collateral whether his sponsors had the excellent scholarly good ta to bestow it upon him without thus much of warrant, i a refreshment to the eye and the mind to see the good name as a live issue once again. Those depredators tainly deserved the smart sentences they got for cut down his ancestral trees.

"Cinderella" Still Despised

In the Birthday Honours lists there figure all sorts conditions of men except architects. Actor-manag doctors, lawyers, bankers, railway and insurance m nates, all receive some kind of recognition for talen for virtue; but one might well be pardoned for dedu from the medley that to win a title it is better to b brewer, a mayor, the clerk to some local authority, chairman of an obscure political association, a to merchant, anything rather than a distinguished archit Art is honoured to some slight extent, it is true, by bestowal of a knighthood on Mr. James Jebusa Shan R.A., and of a baronetcy on Sir A. F. Bird, M.P., a "pa of art"; nor are musicians and actors wholly ignored; the "Cinderella of the Arts" has been again cruelly glected by the Fairy Godmother, or Welsh Wizard whoever it is that so persistently and so lamentably of an obvious duty. One of the new baronets, howe Sir John Jarvis, is closely associated with architecture the building trade, as he is chairman of J. Jarvis Sons, Ltd., the building and engineering contractors.

Housing and Housing Fees (1)

(Specially contributed.)

THE collapse of the housing policy has brought with it many ill consequences. Overcrowding must continue, health will suffer, disease will thrive—physical and psychological results that ultimately have to be reckoned with in pounds, shillings, and pence. Reduction in wages and increase in but having proved insufficient to secure the lowered required, attention has been directed to the high es of materials, and a campaign against "combines trusts" is rapidly developing.

he operative, the master builder, the builder's mer- it are all feeling the repercussion of the shot fired into National Housing Policy. It would be strange if the itect escaped, and the architect has not escaped; he, must suffer some diminution both in prospects and iediate advantage.

he occasion is unique in the architectural profession. he past fees have been prescribed by the authoritative es representing architecture, and adjusted by the vidual architect with the individual client. Here there no individual client; the client was the nation acting ugh its agents the local authorities, and the fees were ed by the councils of the profession in conference with epartment of State. The individual architect, it is could modify, and probably in some cases did modify arrangement when he was dealing with a local autho- ; but in the great majority of cases the fees as settled the Ministry of Health were adopted, and, on the le, with satisfaction, by the profession. That might be so, the fees were good; it need not be said they excessive, but they were good. Take a scheme of houses under the modified scale set out in Memoran- No. 31, on an assumption that it contained an equal ber of the four types, the maximum fee possible, *sive* of charges for laying out and for the construction oads and sewers, amounts to £4,300 or thereabouts, l to about £17 per house. This rosy prospect has in many instances vanished, with the ruthless cutting n of schemes following on the advent of Sir Alfred d. How deep the depression, and how natural the ion is among architects so employed may be gauged by lculation of the fee that would be payable, on the donment of such a scheme, at the point where all the necessary for the purpose of obtaining tenders has done, if Memorandum 52 stands. Assuming that separate designs have been prepared for each of the types, under General Housing Memorandum No. 52, igure of £4,300 becomes reduced to £540, a bare shadow s former greatness. It is little wonder that such a rence has evoked keen criticism and strong opposition. contended by those who suffer that agreements under ousing policy were entered into on the basis of "the itions prescribed by the Royal Institute of British itects in the case of the engagement of Architects," that on those conditions, in such a scheme as has been for illustration, a fee of £2,860 or thereabouts should ayable. It is not in human nature to accept £540 out protest when it considers itself entitled to £2,860, the difference provides a wide margin within which kill of any future negotiators may be displayed. How uch an imbroglio arisen? It used to be well said by Charles Russell that everything happens in order of and that wise saying being as true of the negotiations have taken place between the professional bodies g for architects and the Ministry of Health, it will be ucive to a proper understanding of the situation if are set forth in that order.

e housing policy of the Government was embodied in l which received the Royal Assent in the summer of It placed in the hands of the local authorities the ition of that policy under the supervision and subject to the approval of the Ministry of Health. In carrying out their task, the local authorities had to consider the employment of architects. There were several courses open to the authorities. They might entrust the design of their housing schemes to their surveyors, and some local authorities took that course. In other cases they had architects as officials, who again were charged with the duty; or they might engage architects as whole-time and temporary officials especially for this particular business, and some did so act. In the last resort they might place the work in private hands. If they took this last course, what fees were they to pay? That was the question. There was no definite guide—there were no very pronounced precedents. The work was novel. Working-class houses, like Topsy, had "just growed." The estate agent, the jerry-builder, the surveyor had all had a hand in their design; but in the main it had not been the work of the architect. It seemed desirable to the local authorities, to the Ministry of Health, and to the profession, that some standard of fees should be set up; and in July, 1919, whether on the initiative of the Ministry or on that of the profession is immaterial, meetings took place between representatives of the Royal Institute of British Architects, the Society of Architects, and the Ministry of Health to negotiate a scale. At the outset a difficulty presented itself in that the Scotch architects had already committed themselves to a scale which, in the opinion of their English confrères, was inadequate. In the end this difficulty was surmounted, and a scale agreed on, which was issued in September 1919 by the Ministry of Health under the title of General Housing Memorandum No. 4. In December 1919, after ratification by the general body, this Memorandum was incorporated in the Scale of Professional Charges of the Royal Institute of British Architects, and so became part of "the conditions prescribed in the case of the engagement of Architects." The scale as laid down in so far as the design of "cottages and flats" is concerned was: 5 per cent. upon the first twelve cottages or flats, 2½ per cent. upon the next sixty cottages or flats, and 1½ per cent. upon the remainder. No maximum cost was laid down in this Memorandum upon which fees were to be based; but in General Housing Memorandum No. 31, issued on July 8, 1920, the "Limitation of amounts upon which full scale fees may be charged" was set out out as follows:—

Type of Cottage or Flat.	*Maximum Amount.*
A2—Non-parlour with 2 bedrooms	£750
A3— ,, ,, 3 ,, ...	850
B3—Parlour ,, 3 ,, ...	950
B4 ,, ,, 4 ,, ...	1,050

On this basis the maximum fees obtainable under General Housing Memorandum No. 4, assuming that an equal number of types was used in each scheme, would be as follows:—

Scheme including	250 houses ..	..	£4,293
,, ,,	500 ,, ...	..	8,586
,, ,,	750 ,, ...	..	12,879
,, ,,	1,000 ,, ...	..	17,172
,, ,,	1,250 ,, ...	..	21,465

It will be seen there was no reduction on taking a quantity; but on page 2 of General Housing Memorandum No. 4 the last paragraph of section 1 reads as follows: "Save in exceptional circumstances it is not desirable that any one architect, or firm of architects, should be entrusted with more than 250 houses in any one scheme, but the fees payable in respect of each 250 houses shall be calculated as above, whether or no several architects be employed thereon."

This paragraph undoubtedly embodied the general feeling of both the profession and the public at the time. It was felt that the war had made a very heavy drain

upon the architectural profession, and that on its conclusion many young architects were returning to commence practice afresh under very difficult circumstances. The housing schemes seemed to present an admirable solution of their difficulties, and it was hoped that as many as could would be absorbed in this work. Unfortunately this, like many other pious wishes, was more honoured in the breach than in the observance, large schemes were entrusted to single persons and firms, and public attention began to be directed to what appeared to be very heavy fees payable under the Memorandum. Local authorities drew comparisons between the cost of employing official architects and of placing the work in private hands.

Looking back there seems ground for regret that the policy of the paragraph quoted above was not more rigidly followed; it may well be, that if that had been the case, the present position would not have taken its particular form. However that may be, from one quarter or another the Ministry was driven to seek a revision of the scale, and in February 1920 negotiations were opened between it and the Royal Institute of British Architects for that purpose. An agreement was reached and embodied in General Housing Memorandum No. 31, issued by the Ministry of Health on July 8, 1920. It left the scale of fees for schemes of 250 houses unaltered, but reduced those for schemes of 500 by 7½ per cent., of 750 by 15 per cent., 1,000 by 20 per cent., and over 1,000 by 25 per cent. For purpose of comparison with the fees already given these, calculated on Memorandum No. 31 on a similar basis, would be as follows :—

Schemes for	250	houses	£4,293
,, ,,	500	,, ...	7,942
,, ,,	750	,, ...	11,591
,, ,,	1,000	,, ...	13,737
,, ,,	1,250	,, ...	16,078

This Memorandum was never ratified by the general body of the Royal Institute of British Architects, for the reason that at the last moment the Council was asked by the Ministry of Health to withhold the agreement, as it desired to raise further points for discussion. It would be interesting to know if on that date, November 29, 1920, the determination was forming in the mind of the Ministry to cut down the housing policy and abandon some of the housing schemes.

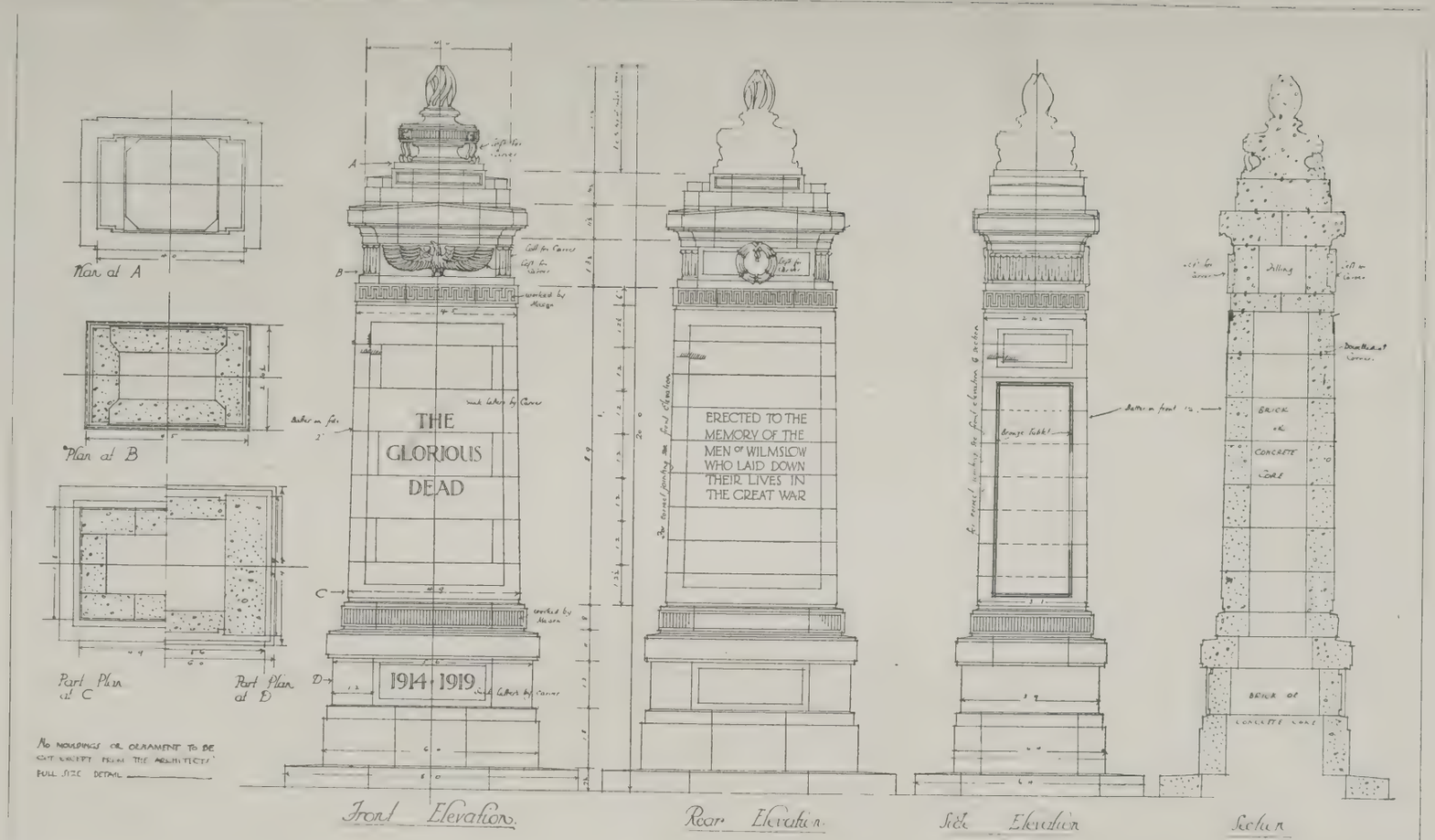
Up to this point apparently no idea had been even entertained, much less expressed, of such abandonment, the spirit being the reverse, that of going on, of spurring on laggard authorities. The cry was "Up with the houses," not "Down with the houses," and it may be this was the reason why no memorandum then issued had specifically taken into account the questions that would arise in connection with fees if schemes were abandoned.

As we have seen, such questions did arise, and the manner in which they were dealt with will form the subject of a concluding article.

WAR MEMORIAL AT WILMSLOW. HALLIDAY, PATERSON, AND AGATE, ARCHITECTS.

War Memorials. 24.—Wilmslow

Halliday, Paterson, and Agate, Architects



Of just proportions and simple design, this monument to "the Glorious Dead" of Wilmslow obviously and naturally owes something to the inspiration of the Whitehall Cenotaph, of which, however, it is by no means a slavish imitation. Its authors have invested it with independent character; although they very wisely recognized the futility—indeed, the undesirability—of striving to shake off the influence of so potent and so famous an example.

ittle Things That Matter. 1—Below Ground

:OMINENT among the little sins of commission and omission which usually produce results in trouble expense most out of proportion to apparent grievousness, are those ected with the placing of the damp-ie, which everyone now recognizes sential in the base of all walls. It is er of common knowledge that the)-course should be at least 6 in. above id line, and below the level of any er; but in the course of adapting this ctly simple proviso to the solid :s and mortar there are occasions e a less simple problem is presented. ie commonest of all causes of dry rot e lower floor of a house is certainly awkward juncture between solid s of cement, or tiles (as in a scullery), boarded floors of ordinary joist con-:tion in rooms adjoining. Fig. 1 :rates the point of weakness. To)ly with the second requisite pos-ed above the damp-course is at least below the floor line. This brings lamp-course uncomfortably near the rside of the adjoining solid floor—or, iese skimped days of 4 in. concrete, ally below it, and in consequence :s the brickwork above in contact the moisture-conducting earth. The t is damp rising in wall and plaster, t decorations, and rot in skirtings and floors. The remedy is to fill in with concrete as shown in Fig. 1 a. That the ground surface below the interior of buildings normally remains moist has been brought home to many this year of drought by a wholly unprecedented and bodily shrinkage which has allowed surface concrete, with all that it carries, to settle to a surprising extent—probably to rise later as the ground again swells. *En passant*, this manifestation has indicated the desirability of supporting joisted ground floors solely from one source, i.e., rather than building in the joist ends to external and cross walls founded at a greater depth than the surface concrete bearing the intermediate sleeper walls, an independent sleeper wall, as Fig. 3, should be provided. This method has further obvious advantages when used in conjunction with the now usual 11 in. cavity walling as shown.

The most difficult situation of all in which to introduce effectively a damp-course is in the thin reinforced concrete raft construction, which is now becoming normal in fenny and waterlogged districts. It is often placed as in Fig. 4, but in this case the continuous damp-course bridging the cavity, though efficient against penetration from below, yet serves as an impervious collecting surface for any moisture penetrating the hollow wall from outside, permitting the inner thickness to absorb any such at its most vulnerable point. Dividing the damp-course improves matters but little, unless it can be raised above the bottom of the cavity also as in Fig. 5. To make this effective necessitates an additional layer of impervious concrete above the actual raft surface so as to raise the wood flooring and internal plasterwork out of contact with material liable to be saturated with moisture.

While on the subject of raft construction there are further points it may be helpful to make clear. This type of foundation is applicable to cases where (*a*) a sound and incompressible foundation is only obtainable at a depth which would inflate the cost of normal trench foundations out of all proportion to the load to be carried, or (*b*) where waterlogged ground makes more than the shallowest of trenches expensive and difficult. In either case, the principle involved is to rely on spread and homogeneity of the foundation slab for minimizing and equalizing the settlement, which it is recognized will take place. On the general question of the design of raft buildings a closely reasoned and admirable exposition appears in the Ministry of Agriculture's Manual on the Equipment of Small Holdings, to which the reader is referred.

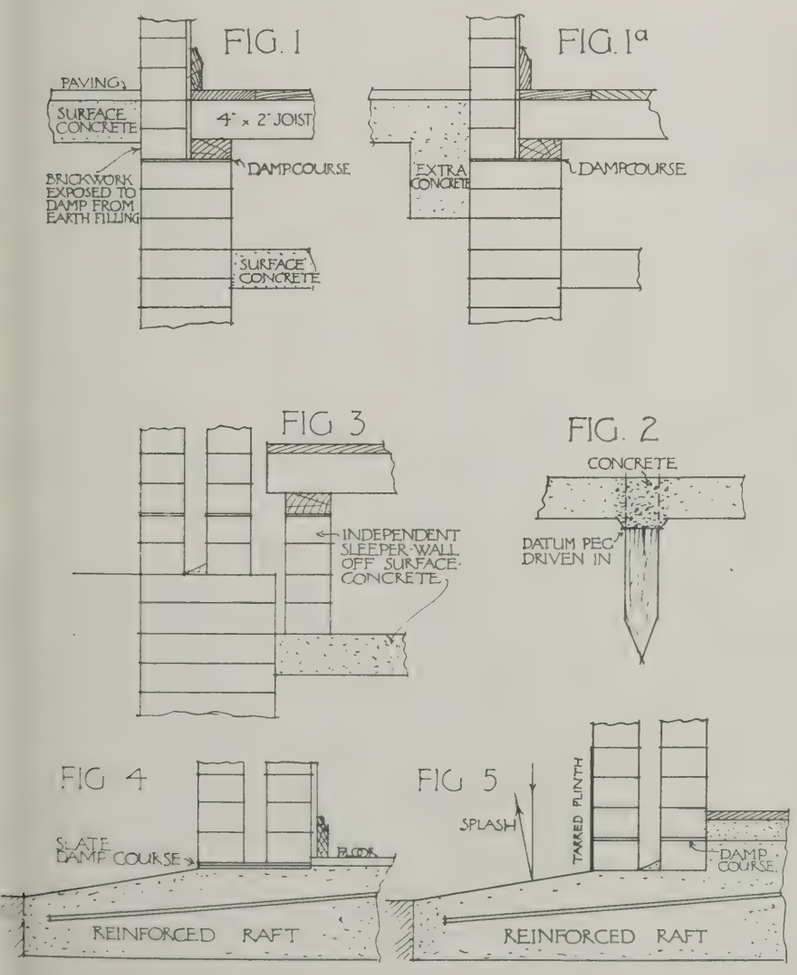
The further detail points (based on experience) which arise are as follows :—

(1) A confusion between the conflicting principles of trench and raft foundation benefits nobody. If the raft form is adopted it should be shallow, practically on the surface, as in those conditions it is equally effective, and no more costly than trench foundations of normal depth and spread.

(2) Whatever reinforcement is adopted —but more particularly if a material in sheet form is used—it is necessary to watch for and check a tendency of workmen and supervisors to lay what is in effect two independent slabs of concrete with the reinforcement between. If it is not practically possible to lay a whole raft in one operation the best manner of making the join is to leave the edge of the reinforcing material projecting about a foot, to be embedded in the next day's concrete and lapped by the succeeding sheet.

(3) Since they will necessarily stand above ground and serve as ledges to conduct water into the walls, brick footings would be harmful. They are in any case unnecessary, but I have seen them put.

(4) The projection beyond the external walls of the raft surface (which may be from 18 in. to 24 in.) greatly intensifies the upward splash from heavy rain. This should be countered by weathering as steeply as may be the projecting surface (see Fig. 4), which helps to direct the splash away from the walls as well as ensuring drainage way from the house. As, without increasing considerably the extra material raising the internal floor level, the damp-course must remain rather lower than would otherwise be desirable, it is practically essential that an impervious tarred plinth should be formed in buildings of raft construction.



A common source for the introduction of rot not only in raft-constructed but in all types of flooring is the failure to withdraw or effectively to seal down the rough pegs (of usually inferior wood) used as datum or level pegs when laying surface concrete. These perhaps get lightly smeared with cement, but remain in the ground perforating the supposed impervious layer and affording a ready ingress to fungoid growths. They should be driven completely through, and their holes filled in with concrete as soon as the level is reached—and somebody must see that it is done. See Fig. 2.

EDWIN GUNN, A.R.I.B.A.

Harold Falkner's Sketches

In this issue we reproduce three delightful pencil sketches by Mr. Harold Falkner.

The premises recently occupied as Lloyds Bank, Farnham, was an interesting old property, at one time threatened with demolition, but now preserved. It has all the elements of the picturesque, and some of the building was probably sixteenth-century work. The round brick chimney occurs several times in Farnham, and the curve from the perpendicular probably dates from the time of the building. The Georgian front has been extended by Mr. Falkner.

The chimneys of Abbotts Hospital, Guildford, a very fine example of Elizabethan brickwork, were exposed to view and seriously endangered by the burning down of the neighbouring premises. Although not so elaborate, the chimneys compare not unfavourably with the work of the same period at Eton. The view has now been blocked out by the rebuilding of the adjoining premises.

Weydon Mill, Farnham, was a very picturesque old structure much favoured by artists. Unfortunately the mill got into a very bad state of repair, and although efforts were made to secure its preservation, it had to be reluctantly demolished. In addition to its dilapidated state the substructure was very damp, and the floor levels were below the flood level. The cost of even temporary repairs was such as to make any hope of the smallest return from the building quite hopeless. The problem of what to do with old water-mills is a difficult one on account of their generally very damp situations. But they are nearly always of very fine construction, and their wooden machinery is an example of great ingenuity and craftsmanship. It seems desirable that one or two throughout the country should be preserved, together with their contents, as a museum for similar craftsmanship.

FROM A PENCIL SKETCH BY HAROLD FALKNER.

R.I.B.A. Examinations

The following candidates have passed the recent Special War Examination of the R.I.B.A.: Messrs. J. S. Allen, F. W. H. Allison, E. H. Allsford, C. D. Andrews, H. T. B. Barnard, P. J. Bartlett, A. Beasley, E. E. Beaumont, H. B. Beek, E. H. Bloomfield, H. L. Bloomfield, J. V. Bowring, P. K. Branson, I... Brooks, F. C. Brown, G. T. Brown, ... Bumpstead, E. Burnett, F. W. Bu... R. Byrom, W. Carter, J. Challic... Chuckley, A. C. Cheek, H. G. Clark, ... Clark, V. G. Cogswell, E. Cole, ... Cook, R. A. Cordingley, G. H. Co... H. W. Couchman, A. C. Cowtan, E... Creegan, H. H. Davies, F. G. Detr... W. B. Edwards, G. H. Fielder, W... Granger, J. H. Greenwood, H. N. ... fith, W. E. Guy, T. W. Haird, F. L. H... day, J. S. Hardie, F. H. Harding... Harrild, J. H. Haughan, J. H. Hayw... A. A. N. Haywood, G. T. Heard, ... Holliday, D. J. Howells, R. Hunt, H... Hunter, H. T. Jackson, C. M. C. John... R. H. A. Jones, R. H. Jones, T. L. J... W. M. Keesey, E. Kirby, A. L. K... G. A. Langdell, E. P. Lavender, A... Lay, J. R. Leathart, G. S. Lewis, H... Luke, N. C. Mackey, G. E. McLe... S. E. Mahon, N. Martin, R. J. M... K. S. Meager, C. S. G. Miller, R. J... Minty, E. A. Mitchell, P. M. New... C. J. Norton, A. T. Owen, G. L. O... E. M. Penman, H. J. P. Price, L. A... Prichard, V. O. Rees, J. E. Ree... G. Revitt, T. F. Rippingham, W. Sa... E. F. R. Sample, C. Scriven, W. ... Seaton, A. E. Smith, C. Smith, J. ... Sturgeon, T. W. Sutcliffe, R. Thorb... A. C. Townsend, C. A. Trimm, W... Von Berg, R. B. Walker, C. S. Wi... H. Williams, E. Williams, T. J. R. W...

Thirty-eight candidates failed to sat... the examiners.

The following candidates passed ... examinations held in Sydney :—

Intermediate.—Messrs. S. J. Hurd ... S. J. Traill.

Special Overseas.—Mr. C. C. M. W... ley.

Special War.—Mr. A. S. Robertson...

Alternative Problems in Design.

The Board of Architectural Educa... announce that the designs submitted ... the following students who are qualify... for the Final and Special War Exam... tions have been approved :—

SUBJECT LIX.

Design for a City Square with Colonn...

Clark, R. J. B.	Reid, A. S.
Jenson, A. G.	Ryle, W. (Miss).
King, W.	Sugden, H. D.
Knewstubb, F. W.	

Designs for various other subjects s... mitted by the following students h... also been approved :—

Burge, B.	Hutton, C. H.
Conlan, J. N. P.	Reid, A. S.
Dent, A. R.	Shroff, L. F.

Institute of Scottish Architects

A meeting of the Council of the ... stitute of Scottish Architects has b... held at Edinburgh, Mr. A. M. Pater... in the chair. The petition for the Ro... Charter is fully completed, and will ... lodged with the Privy Council on an e... date. With regard to housing fees a... presentative has been appointed to m... the Practice Committee of the R.I.B... in London to submit the views of ... Scottish Architects. A Committee is ... report as to the proposal to issue ... quarterly journal to members.

CHIMNEYS OF ABBOTTS HOSPITAL, GUILDFORD, AND LLOYDS BANK, FARNHAM.
FROM PENCIL SKETCHES BY HAROLD FALKNER.

Book Review

Constants for Estimators.

In times when values seem to be constant in nothing but fluctuation, the building estimator wants all the trustworthy guidance he can get in the ascertainment of data and the accurate assessment of relative values. Without some firm foundation, such as the aid afforded by the book which Mr. B. Price Davies has just issued through the Educational Publishing Company, estimating is little better than sheer guesswork. Not every estimator is competent to make it an exact science, and few can lay claim to the skill, exceptional training, and wide practical experience that have gone to the making of this clearly and compactly arranged manual, in which the constants involved in estimating are tabulated on a new system.

This system was devised and elaborated to meet the post-war conditions with which the author was confronted in his own practice. It is in this way that the most practically useful and efficient technical manuals have been almost invariably produced. They nearly always owe their inception to a practical need acutely and personally felt by their authors, who, then building upon experience rather than upon mere theory, are able to anticipate and make provision against the actual practical needs of others.

That is how Mr. Price Davies's book has come into being. Hence the firmness of grasp, simplicity and clearness of presentation, that characterise throughout his guide to estimating. It is a manual that as "a perpetual calendar of estimating" will save much valuable time in hunting for data and in making calculations upon them, and it will therefore prove of inestimable service in assisting the elimination of worry that springs inevitably from perplexity and uncertainty—from the harassing misgivings that haunt the estimator who finds himself obliged to substitute guesswork for precise ascertainment.

Haphazard estimating is peculiarly serious at a time when the demand for strict economy is extraordinarily acute, and implies that every detail must be calculated to a nicety. Nor is the system adopted in this manual dependent on market fluctuations. Mr. Davies derives his data and evolves his system from the careful analysis of fifty-nine housing contracts and two direct-labour schemes, and all his calculations have been independently checked. All the trades are dealt with in full detail and in the customary order of succession, from "Excavator and Drainlayer" to "Painter and Glazier," and in each case the table shows at a glance every chargeable item, and the relative values of materials and labour, and of distinctive processes of workmanship.

There are also tables of weights, the data having been ascertained by actual weighing of modern materials as currently supplied.

In the planning and arrangement of the manual the author has been admirably seconded by his printers, who have set out the tables in legible type that makes reference easy and pleasant. Besides a good index in the usual form, there is a valuable supplementary aid to rapid reference, the several sections, or "trades," being marked off with marginal or "thumb" references printed on linen and ensuring instantaneous opening at any required section. In fact, the manual is stamped everywhere with the hallmark of efficiency.

"The Building Estimator. For the use of Surveyors, Builders, and others concerned in the Estimating of Building Costs and the Ordering of Building Materials." By B. Price Davies, F.S.I., M.S.A., etc., etc. London: The Educational Publishing Company, Ltd., 9 Southampton Street, Holborn, W.C. 1. Cardiff: Trade Street and Penarth Road. Price 12s. 6d. net, post free.

Publication Received

"Spon's Architects' and Builders' Pocket Price Book, 1922." Edited by Clyde Young, F.R.I.B.A. Price 5s. net. E. and F. Spon, Ltd., 57 Haymarket, London.

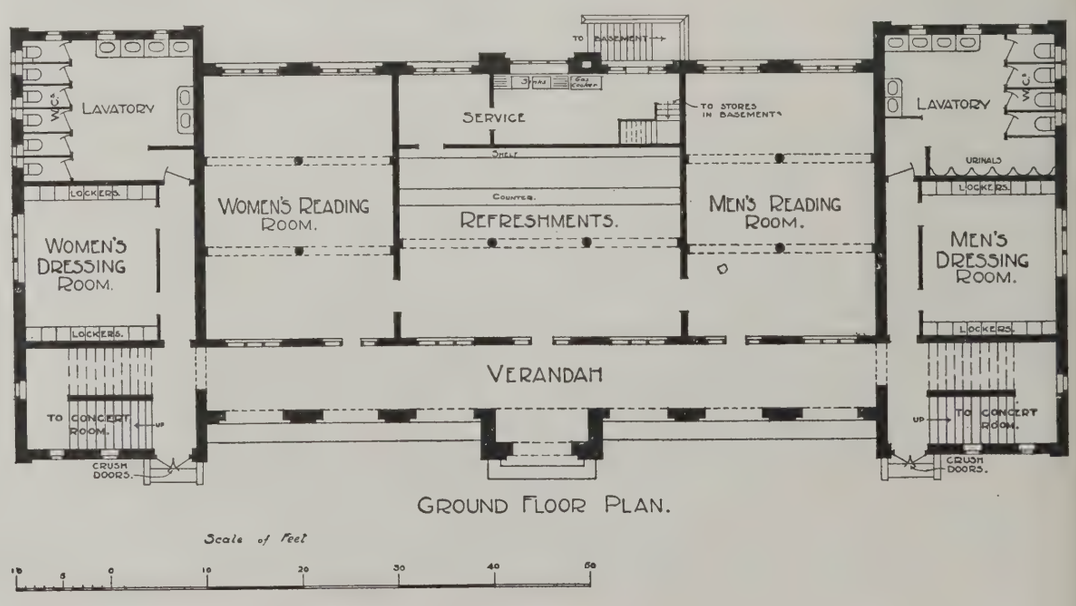
Mr. Goodhart-Rendel Palladio

At the Architectural Associati the evening of January 2, Mr. Goodhart-Rendel gave a delightful l on English Post-Renaissance Ar ture, in which he deplored the ins of the English tradition and urged E architects to keep their eyes upo great continental centres of art; a same time, however, voicing his of those objectionable people wh at everything English. The Pal manner, he said, which was intro into England, of course, by Inigo is held by many people to be unsui northern climates. It necessitat masking of chimneys and the use o wall spaces, and leads consequently insufficient supply of windows; w the French in following Vignola never under-windowed their buil They have profited by the Italian R sance better than we in Englan Wren, Vanbrugh, Hawksmoor, an eccentric Archer alone have avoid Palladian manner.

Talking of Wren, Mr. Goodhart-R pointed out the curious mingling i artist of real greatness with deli eccentricity. St. Paul's is one most curious buildings in the worl magnificence is unquestionable, contains at least two instances of w irrationality. His churches, howe view of the difficulties with which h to contend, are marvellous produc

In conclusion, the lecturer reg the modern tendency summed up words of the auctioneer, "A Georgian replica by an eminent tect." To like old things simply b they are old is a species of sentime which is not desirable.

The artist's function is not to replicas, but to create; and while it i for him to take as his constant mod inspiration the works of some grea ter, he must remember that that himself is far from perfection.



GROUND FLOOR PLAN.

GROUND PLAN OF "THE ELMS" ESTATE WELFARE CENTRE, NORWICH.
GEORGE J. SKIPPER, F.R.I.B.A., ARCHITECT.

141.—"The Elms" Estate Welfare Centre, Norwich

George J. Skipper, F.R.I.B.A., Architect

Reading-rooms, refreshment-room, dressing and cloak-rooms for men and women, with the necessary adjuncts, are provided on the ground floor, whilst on the first floor the whole of the area is devoted to a concert or lecture hall, with at one end a stage platform with dressing-rooms, etc., for both sexes and at the other end of hall a gallery with store-room, etc., under it. A loggia extends along the front on the ground floor between the staircase projections, and off the staircase landings two smaller loggias are provided with corbelled balconies, whence the lawn-tennis and other games in progress on the courts in front of the building could be comfortably watched.

Enquiries Answered

Editors cordially invite enquiries aders who require information on ural, constructional, or legal matters.

ers to enquiries are in all cases the experts, and while every care is make the replies thoroughly reliable, ors cannot hold themselves respon- any inaccuracies that may inad- occur.

spondents whose difficulties involve legal proceedings are strongly urged ult their solicitors before taking n any advice that may be given.

ination questions cannot be an-

ust be understood that, as a rule, stion and answer will be published columns. The name and address uerist must always be given, not ily for publication.

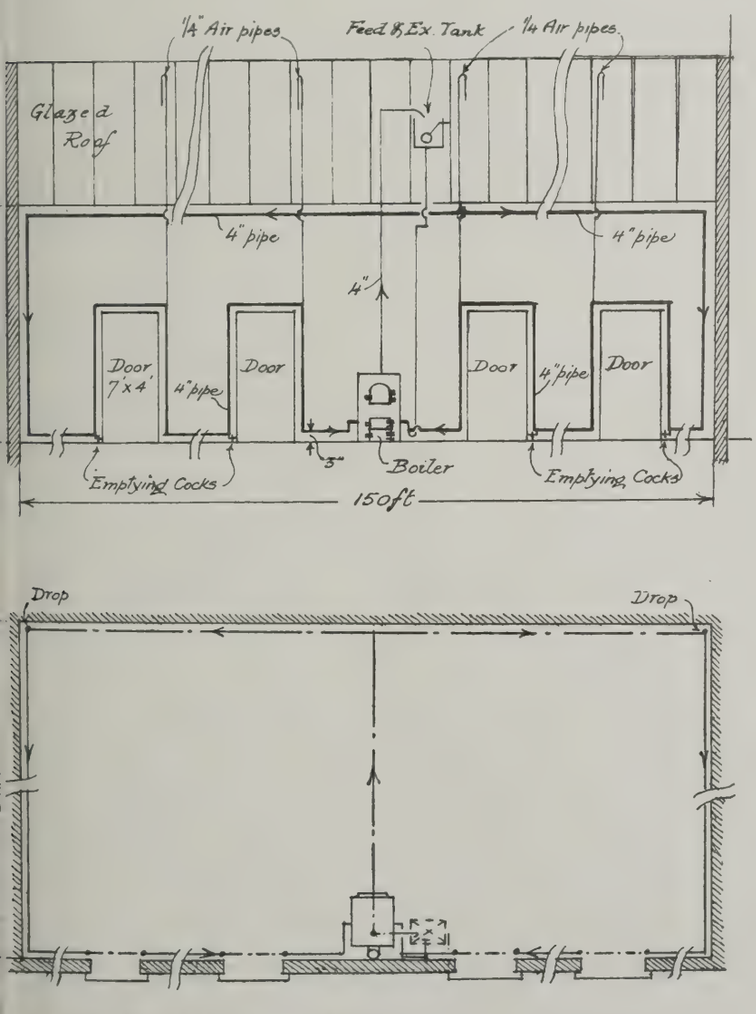
spondents are requested to be as possible, and to write on one side per only.

-Water Heating of Workshop.

Square" writes: "I wish to heat workshop by low-pressure hot-water pipes, and should be glad to know whether the arrangement shown on the sketch (reproduced) would function properly. The pipes are required to be fixed partly at high level to counteract the cooling effect of the roof, and partly at the floor level. If possible it is desired to avoid excavating a pit to accommodate the boiler, owing to drainage difficulties. A further factor is the disposition of the doorways, and the difficulty of passing them at floor level, with the return pipe. I do not wish to cut up the floor, which is of concrete, to form trenches."

—In this case the four doorways shown to be surmounted by the hot-water pipes, up one side and down the other, would lead to a noisy and sluggish circulation, the head of water above the doorways being only 5 ft. If this method is persisted in the air pipes should be ½ in. instead of ¼ in. There should also be an emptying cock to the boiler. It would be very much better to sink the pipes below the door sills and to set the boiler lower. In any case a stop valve should be placed on each branch next to the vertical flow pipe.

HENRY ADAMS.



HOT-WATER HEATING OF WORKSHOP. PLAN AND ELEVATION.
(*See Answer to "Set Square."*)

Refixing an Old Painting.

R. D. writes: "It is necessary to destroy a wall surface on which there is an old painting on the plaster of no great artistic value but of personal interest. The plaster on which the painting has been executed is old and not very good, and is of ordinary lime and sand mixture. Is it possible to remove and replace this painting which is, roughly, 6 ft. by 4 ft., by pasting canvas or stout paper on the face to hold it together until it is put up in a new position? Is there anyone who makes a speciality of doing this kind of work?"

—I hardly think it would be possible to remove the plaster and refix it. However, a trial might be made by pasting on the surface of the painting a piece of ordinary calico, such as is used for sheeting, using starch as an adhesive. With great care the plaster might then be cut out and transferred to the new position, and then the sheeting could be soaked off. I do not think any firm have made a speciality of such work, but your correspondent might communicate with Messrs. de Jong & Co., Ltd., 84 Albert Street, London, N.W. They possibly could do what is required.

A. S. J.

Manufacture of Plaster of Paris.

M. R. writes: "What temperature is required to burn or dry magnesium limestone gypsum to produce alabaster (plaster of Paris), and what the best method of manufacture? Could you also inform me of some publication which would deal with this matter, including particulars of erection and design of kilns?"

—Alabaster is not the same as plaster of Paris, but is a soft rock which, when polished, resembles marble. It is not made artificially, but is quarried as a natural stone, and worked into the desired shapes by the methods ordinarily employed for working stone. Magnesium limestone gypsum is not suitable for plaster of Paris unless it is almost free from magnesium compounds. The material would, therefore, require to be tested chemically before anything further could be done with it. The method of manufacture consists in heating finely pulverized pure gypsum in an iron vessel (known as a "kettle") to a temperature which must not exceed 400 deg. Fahr., whereby a product is formed consisting of two molecules of calcium sulphate combined with one molecule of water. The product is sifted, and may be reground in order to produce superfine plaster. The best present use of true alabaster is to make it into "fittings" for electric lights, vases, etc. There is a material known as alabaster which is not composed of gypsum but of aragonite; this is a true marble, and does not form plaster of Paris when heated. Various books and encyclopædias give outlines of the process, but your correspondent, before taking any action in the matter, would be well advised to consult an advising expert. The manufacture of plaster of Paris is an industry requiring great technical skill, and for this reason is not to be lightly started by those having no experience.

The Stability of Floors and Thin Walls

Two interesting reports dealing with the experiments carried out on floor and thin walls respectively for the Building Materials Research Committee (the predecessors of the Building Research Board) have just been issued. In the summer of 1917 the Housing (Building Construction) Committee, appointed by the President of the Local Government Board, with Sir John Tudor Walters as chairman, approached the Department of Scientific and Industrial Research with a view to the Department undertaking the direction and conduct of a series of researches connected with the employment of new materials and new methods of construction in the very large housing schemes which were then in contemplation by the Government.

The matter received the consideration of the Advisory Council, and a Building Materials Research Committee was eventually appointed, constituted as follows: Messrs. Raymond Unwin, F.R.I.B.A. (chairman); R. J. Allison, C.B.E., F.R.I.B.A.; P. M. Crosthwaite, B.A.I., M.Inst.C.E.; William Fairley, M.Inst.C.E., F.G.S.; G. W. Humphreys, C.B.E., M.Inst.C.E.; Professor E. S. Prior, A.R.A., F.R.I.B.A.; and Mr. B. Seebohm Rowntree, J.P. The terms of reference to the Committee were: "To make arrangements for carrying out research on building construction instituted by the Department at the instance of the Local Government Board Committee, to be responsible under the Council for the direction of such researches, and to deal with such other matters as may be referred to them from time to time by the Council."

The committee prepared a programme of investigation indicating the directions in which research was desired in regard to the construction of houses for the working classes. At an early stage of the inquiries it was realized that research on many of the subjects included in the programme, to be really useful, would involve years of work and an organization such as was not at the committee's disposal. Owing also to war conditions the practical difficulties in the way of experimental work on a large scale were very great. The committee gave a survey of the field requiring investigation and submitted accounts of the experimental work carried out on the restricted problems with which it had been possible to deal.

It was generally realized that the actual stability of unsupported walls only a few inches thick was very small, and that such walls in practice always received support either at the top or sides or both. It appeared, therefore, to the Committee that the most practical method of attacking the problem was to ascertain the breaking strength of typical walls when subjected to crushing loads and horizontal pressure applied to the walls while held at the top and bottom. This would correspond roughly to a wall having in it two door openings, the strength of a wall with no openings being somewhat greater.

The difficulty of applying loads by directly weighting the walls was realized. It was found possible to secure the use of a hydraulic testing machine which was capable of crushing short walls 8 ft. 6 in. high, which is about the height between floors in a building of the cottage type. The investigation was entrusted to Dr. Oscar Faber, who is eminently qualified to carry out work of this description.

Tests were made on several commonly used materials, and each material was loaded to destruction in three ways:—

1. Small cubes, generally 6 or 9 in. square, were crushed in order to ascertain the strength of the material when not used as a thin structure.

2. Columns or pillars, 14 in. wide, from $2\frac{5}{8}$ in. to $4\frac{1}{2}$ in. thick and 8 ft. 6 in. high. These narrow, thin walls or pillars were crushed, and their relative strengths compared with that of the cubes were ascertained.

3. Short lengths of wall, 3 ft. 6 in. wide, from $2\frac{5}{8}$ in. to $4\frac{1}{2}$ in. thick and 8 ft. 6 in. high, were subjected to a vertical load of about one ton per lineal foot of wall, and, while thus loaded, a horizontal pull was applied to the wall at the middle of its height until failure took place.

The report states that, considered as a whole, the results obtained are remarkably consistent, more so than is usually the case in tests of full-sized specimens. The principal facts brought out are the high relative resistance to crushing shown by the slender walls or pillars, and the weakness of the lime mortar compared with Portland cement when tested in this way. With the exception of the wall built with lime mortar, the crushing strength of the walls varied from 67 to 83 per cent. of the strength of the same material crushed in cubes. The lime mortar only showed 30 per cent. The high percentage strength is to some extent due to the care exercised in centering the column under test. It is, however, clear that strengths approaching these can be developed in practice, provided care is exercised in the bedding of the joists, so that the load acts as nearly as possible through the centre of the wall. It is also necessary that the wall should be absolutely vertical.

The results further show that the walls built with Fletton bricks on edge in cement ($2\frac{5}{8}$ in. thick) resisted a much higher crushing load and horizontal pull than those built with the same bricks laid flat in lime mortar ($4\frac{1}{2}$ in. thick).

The coke breeze specimens showed low resistance to crushing, but a comparison of the strength of the cubes with that of the walls shows that, in spite of the low strength of the material, the percentage of strength of the wall is high as compared for example with that shown by the wall composed of Fletton bricks. Against the horizontal pull they gave better results than would be expected. All the concrete and breeze blocks show a high resistance to the transverse loads as compared with walls formed from smaller units such as bricks.

It is stated that the tests on the floors generally supported the view that considerable reliance can be placed on composite floors constructed of bricks or tiles with reinforcement of steel. Ordinary rules for determining the amount of steel and the strength of floors constructed of bricks and tiles should, however, be applied with caution and used as rough guides only.

Copies of the reports may be purchased through any bookseller, or directly from H.M. Stationery Office at the following addresses: Imperial House, Kingsway, London, W.C. 2, and 28 Abingdon Street, London, S.W. 1; 37 Peter Street, chester; 1 St. Andrew's Crescent, Ca 23 Forth Street, Edinburgh; or Eason and Son, Ltd., 40 and 41 Sackville Street, Dublin. The pri the report on "The Stability of Walls" is 6d. net, and of "The E ments on Floors," 1s. 3d. net.

Unemployment in t Building Trade

Major G. B. Flockton, in his pres tial address to the Sheffield South shire and District Society of Archi and Surveyors, gave it as his opinion unemployment in the building and trades had mainly arisen because some time past the trade had not value for money received. Times had difficult, he agreed, but the interfe of politicians who would meddle, and uncertain factors, had made it nece for the contractor to cover himself ag circumstances out of his control; b ought to be possible now to retur more normal conditions.

There need be no fear of moppin all the work in the building trade continued. Of my own certain k ledge I can say that two years there were scores of thousands of po worth of building work ripe and read commencing. In many instances working drawings were made, and in the quantities were got out ready tendering.

That work was stopped because o unstability and uncertainty of Contracts for a fixed sum could no obtained, and the unsettled stat labour made it impossible to fi time for completion. To-day the was cram full of work only waiting reasonable stable prices and stable ditions of labour so that it might be in hand.

Government housing is dead, said Flockton, and if we have any desire the people of this country shall eve properly housed we must most devot pray that it is not only dead, but ut and completely cremated.

During the evening prizes were sented to the following students:—

President's (Major Flockton) p value £5 5s., for the best design prod by an ex-Service student, for design memorial to be erected in Serre to of Sheffield City Battalion, Mr. J Brown, Sheffield.

Council's prize of £5 5s. for the note-book of the year, divided equ between Mr. C. C. G. Osborne and M W. Wightman.

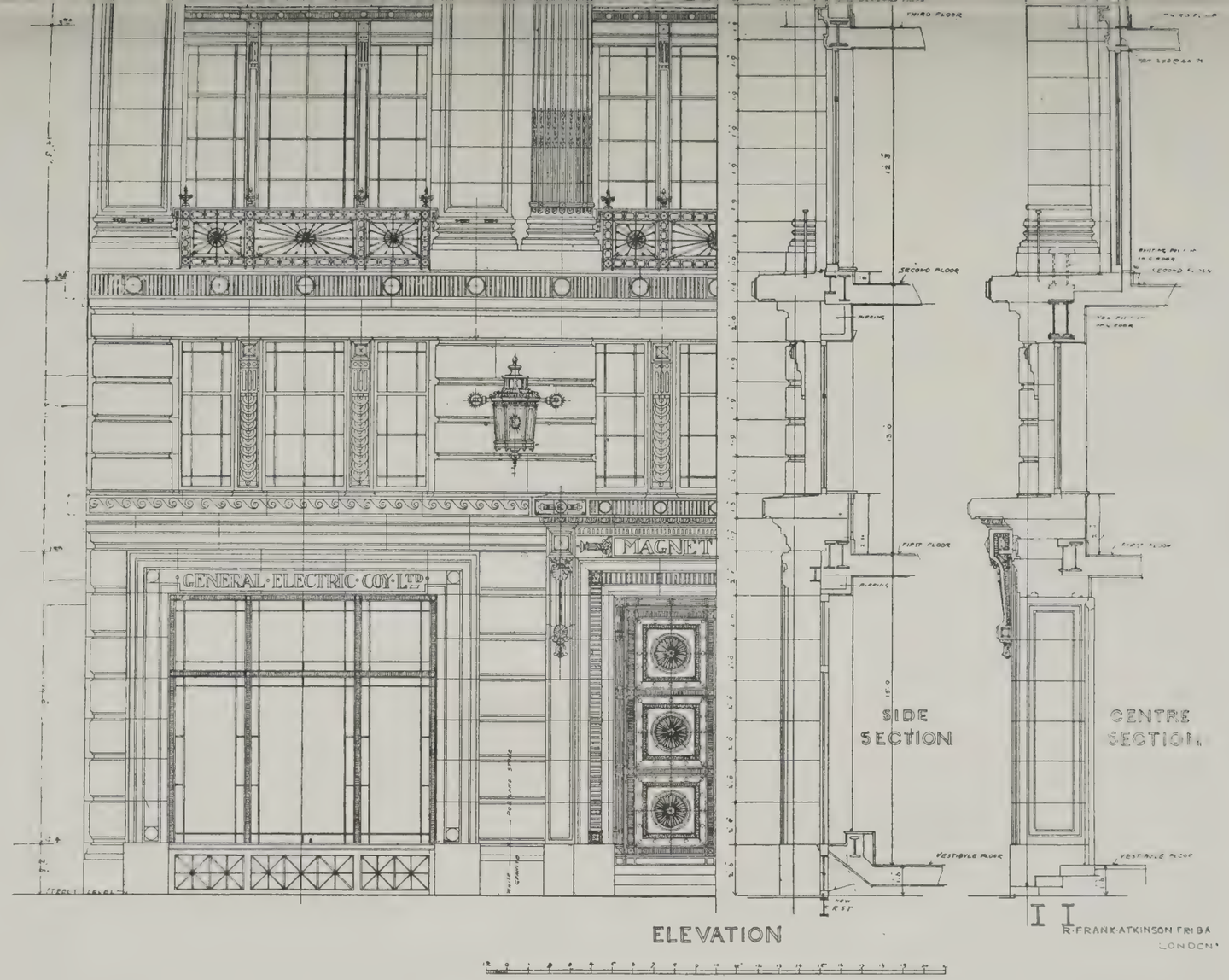
Extra special prize of £1 1s. for the note-book sent in by first-year stude Miss M. Davies.

It was announced that Mr. E. Winks, of Worksop, ex-Service stud had been awarded first place and £2 for being the best student of the y out of over 290 candidates who succ fully took the examination for mem ship of the Society of Architects.

The only other candidate from Shef University for this examination was C. C. G. Osborne, who passed with award of merit. Mr. Osborne obtained fifth place in order of meri the kingdom at the last examination the studentship of the Royal Institut British Architects.

Architects' Working Drawings. 47.—Magnet House, Kingsway

R. Frank Atkinson, F.R.I.B.A., Architect



Magnet House, the happily named new head office and showrooms of the General Electric Co., Ltd., covers a ground area of 25,722 sq. ft., and has eight floors, including the basement; each floor being divided into eight sections by brick walls, which accommodate 130 fireproof doors of several types; and seven passenger lifts are installed, as described and illustrated in our issue of January 4.

Correspondence

)ear Bricks—A Search for a Remedy"

'o the Editors of THE ARCHITECTS' JOURNAL.

ɪs,—Your correspondent E.N.B., in renchant article on the above sub- which appeared in your issue of mber 28, has "builded better than new." Possessing as I do some ledge of what is going on behind the s, I can assure him that the light he hed on the situation is viewed with distinct disfavour by those who are pulating the wires, and, unless I am mistaken, we shall witness improved tions before long as a result of his ɪ.

ck manufacturers would be wise y heed to E.N.B.'s statesmanlike ul for an immediate conference be- ı them on the one hand, and the us interests with which they appear in conflict.

the position were frankly faced and ssed by all concerned in a spirit of romise and good will, I venture to ıesy that a practical solution of the ılty would quickly emerge, and that existing paralysis in the building would give place to renewed ty.

the meantime, it is evident that the ity of contractors and local autho- to pay the current price of bricks ed to an extended use of concrete s and other alternative methods of uction.

e wonders if this perfectly natural opment is sufficiently realized by who are standing out for maximum prices.

SUB ROSA.

) the Editors of THE ARCHITECTS' JOURNAL.

s,—With regard to the Govern- s interest in bricks, it appears that .B.M.S. is unable to get rid of its supplies except at a loss, on account enormous prices paid the manufac- for them. Therefore the D.B.M.S. to its bricks and tries to coerce ıg-schemers into buying them at prices, excusing itself for this s behaviour by saying that any loss ed by the Department will have to ade good out of the taxpayer's t!

ce the D.B.M.S. is so piously inter- n the state of the taxpayer's pocket, s so anxious to save him unneces- xpense, it might be as well to point at the effect of this policy is to keep rices of all materials higher than ought to be, and to put another le in the way of building revival. lition to this, it might also be hinted om the taxpayer's pocket come the of supporting the D.B.M.S. He act, actually paying for the support department whose business is to is high as possible the bills which ıxpayer has to foot. This is an ıl situation, and doubtless a matter Dickens or Mr. Punch; but, unfor- ly, while the humorist smiles, the taxpayer pays, the builder remains idle, and the architect starves.

Would it not be better to wind up the affairs of the D.B.M.S., pay the deficit, and get reasonable prices, than to pay the staff of the D.B.M.S. to keep prices inflated?

TAX-PAYER AND BRICK-BUYER.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Under the above heading I noticed in your issue of December 28 a very good article on the present abnormal cost of bricks, and an endeavour to locate the elusive party responsible for the prices ruling.

Your correspondent E.N.B. will no doubt be pleased to know of an excellent remedy in the form of hollow terra-cotta blocks which only cost 6s. per yard, and are infinitely better than brickwork when properly used. Previously, this class of walling had to be rough-casted or covered with other protective material owing to the impossibility of securing a permanent vertical joint between the blocks; but this drawback and others have recently been overcome by the introduction of specially rebated and splayed ends, which form a key-joint that cannot possibly fall away when once formed. This joint, together with an improved stilted roll on the top of the blocks, gives additional lateral support to the walling, and it has been demonstrated that a 6 in. wall built of this material is stronger than a 9 in. ordinary brick wall.

Other improvements recently registered with a view to perfecting this construction are secret flue-blocks for gas stoves and cookers; also angle or quoin blocks, and intercepting blocks for tying in cross or division walls.

I am erecting six houses and three bungalows in Barnt Green, Worcestershire, and have recently erected several bungalows in Droitwich and district with this material, and it has given all-round satisfaction. I may add that three yards of walling can be erected in the time required for laying one yard of brickwork, and considerably less mortar is required.

J. E. ABRAMS, F.S.I.

Unemployment and Housing v. the State Exchequer

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Unemployment in conjunction with the housing shortage seems to have reached a crux, now that the money for subsidies is no longer forthcoming, and the dole considered demoralizing.

The suggested solution of giving employment without putting down the actual cash, but by guarantee, is a masterstroke, and gives hope to the heavily taxed trader and citizen. May I bring it to your notice that the building trade will practically cease together with the subsidy. In searching for the remedy there is one which I have not yet seen put forth.

The building societies have been exerting themselves to the straining point, but their capital has in most cases become absorbed; here I think the Government might step in and, without putting down a penny capital, induce both private and speculative builders to raise anything up to nine-tenths of the capital required from "Approved Societies," the societies in their turn being backed by Government guarantees against any final loss (a negligible possibility) on such deals.

On close examination there appears no need for anxiety that the Treasury would ever be called upon, as any bank would be ready to find cash when Government guarantees were the security. Is this not an avenue at least worthy of exploration?

ARTHUR R. WELBY.

Unification and Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I find in your issue of December 21 another letter on Unification and Registration, in which we are told again that the Council of the R.I.B.A. approves of opening the doors of the Institute to "all architects of the United Kingdom," and the words are added "without test or examination." The letter is signed by Mr. A. W. S. Cross and Mr. George Hubbard.

I wish to point out once more that there is, and has been, no question of admitting any but qualified men. At the Council Meeting on May 23 a report of nine printed pages, setting out Scheme A and Scheme B, was dealt with; and the following very brief resolution passed:—

> "That the principle of Scheme A, namely, the bringing of all architects of the United Kingdom into Membership of the R.I.B.A., be adopted as the basis for Unification."

(Scheme B was the Federation Scheme.) Scheme A refers throughout to "qualified" architects and to qualified architects only, and it provides for them to be placed in the class appropriate to their qualifications. Both signatories of the letter had this report, both of them understand the nature of the principle involved. Is it "cricket" for them to endeavour to convey by means of the Press the impression that the R.I.B.A. proposes to admit without test or examination all who apply? The thing is, after all, almost too grotesque to be taken seriously. The writers of the letter know, and I now remind them of it, that it is proposed to set up a Board of Incorporation which shall be the sole judge of the qualifications of candidates. One welcomes sound criticism, but this criticism is neither sound nor ingenuous.

As for Registration, the writers of the letter are entitled to the opinions they hold on the probability of securing it, but they and all others may rest assured that we shall never get it unless we can go to Parliament with the solid backing of the whole profession.

ARTHUR KEEN,
Hon. Secretary,
Committee on Unification and Registration.

The Liverpool Architectural Society's Report

The Liverpool Architectural Society, whose "Kalendar and Annual Report" has just been issued, begins the account of its proceedings by indicating the methods by which legacies may be left to the Society; so that if you are at the point of death, and have not yet decided which relative most engages your affections, your safe course is to purchase a copy of the "Kalendar," and by filling up the form in front settle the matter in the interest of Mr. Ernest Gee.

Another interesting item deals with the R.I.B.A.'s idea of promoting closer association between the members of the profession generally, and more especially between those of London and the provinces, by arranging conferences from time to time in various parts of the country. The Liverpool Society being the oldest provincial society in England, the council invited the Institute to hold the first Conference in Liverpool, and the invitation was accepted. The Conference was held on June 24 and 25 last.

The following "Orders" made by the Council are also of interest to architects:

"That it is reasonable that an Architect should sign his Buildings in an unostentatious manner, similar to that adopted by Painters and Sculptors."

"That it is undesirable for Architects to exhibit their names on boards or hoardings in front of buildings in course of construction."

"That a Member having any ownership in any building material, device, or invention proposed to be used on work for which he is Architect shall inform his employer of the fact before their use."

"That in the opinion of the Council public advertisement by an Architect is a contravention of Article 21."

"That in the opinion of the Council the business of Auctioneering and Estate Agency are inconsistent with the profession of an Architect."

With regard to the first clause, on the signing of buildings by their designers, it is worth remarking that several more London architects have lately taken to signing their buildings. It is really surprising what interest this practice adds to the study of architecture, even to architects themselves, who, owing to their familiarity with the characteristics of their contemporaries, are able to make pretty certain of the author of a new building, and find it gratifying to discover the suspected name chiselled modestly on the corner-stone.

The Royal Air Force Club

At a Private View held on the last Saturday in December, Mr. Maurice Webb conducted a crowd of Press representatives over 128 Piccadilly, the new Royal Air Force Club, for which, in conjunction with Sir Aston Webb, he prepared the designs. The exterior belongs to a previous building, but the interior has been entirely gutted and redecorated, its designers achieving almost monumental effects in the handling of the passages, which remind one of the aisles of St. Paul's.

The entire scheme has been under the hands of the architects, from the actual planning of the building down to the selection of carpets, curtains, and bedcovers, with the result, of course, that the *ensemble* appears harmonious and delightful. Some of the colour-relations in the bedrooms, of which there are about eighty, are especially charming, and the combination of brilliant curtains and simple wall-spaces (in the dining-room, for instance) displays a really vivid and vigorous conception of colour.

The arrangements for the service of the club are on a large scale. The staff consists of a hundred and ten servants, of whom about fifty are residents, the head chef himself being, so we gather, a rather famous personage in the world of cooks.

The kitchens, sculleries, and larders are fixed up with the most up-to-date appliances, including ovens heated by steam, and a complete refrigeration apparatus; and two huge locomotive boilers supply hot water and steam for baths, central heating, and the steam-heated appliances.

The club is in a delightful situation, overlooking the Green Park, of which an attractive view is to be obtained from the dining-room. Here the natural charm of the room is considerably enhanced by the nature of the *cuisine*, which, if the Press luncheon was any criterion, is likely to be appreciated by the Service that while it soars to the stars gives no indication that it despises the good things of the earth.

Architectural Partnerships

Mr. Herbert A. Welch, A.R.I.B.A., has taken into partnership as from January 1 last Mr. H. Clifford Hollis, A.R.I.B.A., and the practice will in future be carried on under the title of Messrs. Welch and Hollis. The address, No. 7 New Square, Lincoln's Inn, W.C., will remain unchanged.

Mr. Norman G. Bridgman, F.R.I.B.A., has taken his son, Mr. Gerald S. Bridgman, A.R.I.B.A., into partnership. As hitherto, the practice, which was established by Mr. Geo. Soudon Bridgman, M.S.A. (retired), over sixty years ago, will still be carried on under the name of Bridgman and Bridgman at Fleet Chambers, Torquay, and 1 Palace Avenue, Paignton.

SIR JOHN JARVIS BART.

Sir John Jarvis, Bart

Amongst the new Baronets in the
Year Honours is Sir John Jarvis, C
man of Messrs. J. Jarvis and S
Ltd., building and engineering con
tors. He was managing director of
firm for fourteen years from 190
1919. The firm itself was establi
as far back as 1850 at 250 Hac
Road, E.; it still occupies these prem
in which the business was started
Sir John's grandfather more than sev
years ago.

Sir John has had wide experienc
engineering and constructional prob
in different parts of the world, and
specialized in difficult and dange
problems with conspicuous success.
der his direction many important
tracts have been carried out by his
including churches in Australia, Grim
Little Coates, Harrogate, Southend,
elsewhere. He built the Sark Lighth
for Trinity House, the Radium Insti
the Lancashire Electric Power Comp
Manchester Works, and the D
United Tramways Company Chim
Most of these buildings included
special feature of constructional
The business proudly boasts tha
works have never been closed for a s
hour owing to any industrial di
during the whole course of its long c
Many of the present employees are g
children of original servants of
founder.

Sir John was associated with the
Mr. William Willet in endeavourin
settle the protracted building stril
1914. Although it was the outbre
the war that terminated the dispute
action of these gentlemen did mu
create a better feeling with the
leaders. His valuable commercial
ing has had much to do with the su
Sir John Jarvis has achieved in
spheres. He is managing director
foreign banking and financial h
deeply interested in London's
financial daily newspaper, and has
business interests.

Over and above his services durin
war—he had an important appoint
in the Ministry of Munitions, consist
refusing to accept any remuneration
advice and assistance are frequ
sought by the Government in conne
with the complicated problems whic
arise as to financial reconstructior
currency exchange, in which subje
is a recognized expert. He has st
economics, not only at home, but a
the Continent, in France, Ger
Austria, Italy, Spain, and Holland
so on. He has travelled widely.

Sir John is still in the early fortie
is still keenly interested in sport of
kinds. In his day he won many
on the running track in the colours
London Athletic Club and the
London Harriers, and at other s
As a member of the Middlesex C
Football Association he took ov
Association Football team to the
tinent, which lifted the Cup a
Brussels Exhibition. He has long
at Enfield, where his neighbours t
his philanthropic work; but he has b
Hascombe Court, near Godalming,
beautiful estate with a seventc
century Tudor manor house, whe
will take up residence within the ne
months.

Modern American Architecture 35.—Cicardi, St. Louis, Mo.

T. P. Barnett Company, Architects

Cicardi, a high-class restaurant in St. Louis, Mo., has been provided, it will be seen from this view, with an appropriately distinctive home, the design showing a delightful assemblage of harmonious features: curved roof, peaked pediment, arch, beam, cornice, pillars, and square-headed doorway, showing complete congruity in diversity. It illustrates the truly architectural character that may be imparted to a cement façade; the material used in this instance, both for the constructive and the decorative details, being Atlas White Portland cement.

Contemporary Exhibitions

New English Art Club

ough not one of its best years, there gh portent and worth in its winter tion to sustain interest throughout, vere one with friends, to allow of disputations on the merits and it mistakes hung on the walls of W.S. Galleries, Pall Mall East. as far as the N.E.A. Club is con-, the day of the cube and spheroid s to be passing, it is curious to note all the same, the cult of this in-ng and, on the whole, valuable s of art has left lasting marks on the ing of most good modern pictures, ese can be seen over and over again s exhibition, only such marks are d into the whole realistic pattern, control it within more significant els.

be the oils are somewhat barren in still, they contain enough good , and it is perhaps a relief to in vain for those conscious star which are by way of blighting with their gorgeous stunts. Never-, four or five pictures do stand out. is "Mrs. Lewis of the Cavendish" by A. Guevara, a hedonic assem-of rather too rich colours which, by wizardry of the artist, help to bring e features of the elegant sitter. st place, however, "Gypsies" (19), N. Lewis, are fighting it out with Steer's chaste "Bathsheba" and ad Bone's "Heart of Versailles." ypsies" we have a very forcible tation of seven men, women, and cents, all of whom are obviously g," as is to be expected of this self-ned and unwashed species of out-Low tones, a complete absence of or shadows, and a curiously con-background of trees and bushes the whole scene an undeniable tive value. With the late Wilson "Bathsheba" one is afforded r opportunity to admire his all-artistry. Steer, of course, is known for his water-colours, but e is seen as an able oil-colourist, an r and disciple of Rubens and ; his "Bathsheba" is a luscious ing of womanly flesh done in "pâte " of but few tones, but the doing is kably vigorous and convincing. t of Versailles" (136), by M. Bone, l focus even more attention than it As pure draughtsmanship goes, it rival in the galleries; for a drawing ch size, it has beautiful balance, dramatic power, and in some ways king at it we are not far from n and the impeccable pencil artists ghteenth-century France. John has a very able thing in "Bathers," p of naked women in small river the whole action being mellowed by y lyrical sweep of polyphormic and d landscape. To lovers of romantic apes we commend a robust affair, y Falls" (98), by C. J. Holmes, a and exhilarating canvas. With its blue hills and green and grey back-d the picture has been invested with lease of life, and is exceedingly painted. The art-critic of "The Mirror" must have felt this as a shock when he wrote: "There is one very good picture by Sir Charles Holmes, who is Director of the National Gallery, and therefore ought to know something about painting." A shrewd and final statement on the matter.

There are many drawings and water-colours of architectural interest. The "Waterfall" (35), by Wyndham Tryon, the "Church at Montreuil-sur-mer" (39), by D. S. MacColl, and "St. Gervais, Paris" (50), by H. Rushbury, are especially fine. "Drury Lane Theatre" (160), by F. S. Unwin, is less delicate than the last one, but the immediate and powerful effect that can be obtained out of pen-and-ink and monotone is here well gotten out.

G. HOLT.

The Art of the Camera

John Galsworthy's Foreword to the catalogue is the first thing you should read when you go to admire Mr. E. O. Hoppé's "New Camera Work" at the Goupil Gallery. It puts you in the right spirit to appreciate amongst "Human Documents," "Lyrical Landscapes," and "Literary Portraits," a fine series of atmospheric views of New York which architects will probably enjoy on their intrinsic merits even if they are a little tired of the subject.

Mr. Galsworthy says he is "indifferent to academic discussion of whether photography is an art or a craft"; he expects in photography "only the interesting or beautiful," but he does not say where he expects the interest and beauty to lie—in the photo or in its subject. In "Human Documents," for instance, which consist of a collection of London and New York types, such as "The Horse-Bus Driver," or "The Flower Girl," the subjects are engrossing because they recall the memories and associations of familiar streets and of faces with which through long years we have become so intimate that we consider them part of ourselves. But, fascinating as these are from a human point of view, the value of photography lies eventually in the photo itself.

No one can doubt that Mr. Hoppé excels as a photographer. He is called "the consummate photographer" in the Foreword, but the very excellence of his work betrays its weakness. Last and first, photography can only achieve an "effect"; it can never *realize* thought, as painting can. It can represent exquisitely combinations and relations of form, but it cannot penetrate below material things. The more artistic and original a woman's pose, say, the more it appears in photography ephemeral—the thing of a moment. You feel that when the cap goes back over the lens the model will stretch herself and relax into a natural position. This is unpleasant because it gives the impression that the subject of the portrait has not been represented as she is, but as she would like herself to be, which is probably a different thing altogether; whereas, in painting, though the sitter is posed sometimes quite unnaturally, and may be painted with features she does not possess, the artist (if he is a true artist, that is to say) will ultimately achieve a certain quality, a tone, a character, which need not appear to have any connection with the actual drawn lines, yet will be in reality the essence of the painting, and will reveal not so much the likeness as the personality of the subject, expressing that definitely and finally for all time. Thus one feels with all these portraits of men and women that, after all, they are figure poses, nothing more, not the men and women themselves; and the portraits which convey this impression least, such as those of Thomas Hardy and Hilaire Belloc, turn out to be the portraits which are least posed and most natural. Thomas Hardy, indeed, is a wonderful achievement.

On the whole one feels that this photography is at present inclined to be a little too fashionable. As far as architects are concerned, the Americans employ it to make their buildings spectacular on paper, which is good for publicity.

H. DE C.

The Marees Society's Facsimiles

Hitherto the Medici Society prints have been considered the most satisfactory attempt in drawing and painting reproductions, but it may well be that they will have to drop back now and give precedence to the very remarkable facsimiles of the Marees Society.

An exhibition of their work at the Independent Gallery, Grafton Street, proves to what pitch of excellence modern processes of colour-printing can attain. True, the plates on view are rather limited in number—ninety-three, to be exact—but they are so happily chosen and so convincing in their degree of freshness that, after seeing them all, one cannot help turning to the folios from which they were culled, and it is then made clear what a bargain is being offered to the discriminating public, the folios ranging from four to nine guineas, and a more modest price could hardly be expected.

A deliberate and great care of selection has been bestowed on the venture. It is to be observed that eighteenth-century art is here especially noticeable. For those of us who are not wholly absorbed as actors or spectators in the art movements of our own day, eighteenth-century painting, not so remote from ours in date or clime as to be unintelligible, yet sufficiently so to be amusing, piquant, nay, paradoxical, affords rich material for study and delight. The period abounds in documents not only dry, but readable, and here we have our meed of such. Probably the best examples—although all are so very fine that this matter of selection can only be settled by personal taste—are the twenty reproductions after the Venetian Masters of that golden period: Tiepolo, Antonio Canale, both Guardis, Piranesi, and Pietro Longhi. Next come the fifteen facsimiles after Chinese woodcuts, the ten facsimiles after the French Masters of this same eighteenth century, and the Cézanne, Renoir, and Van Gogh reproductions.

There are, again, beautiful folios of Rembrandt's works; ten reproductions from the Dürer portfolio are equally felicitous.

What best shows the indeed remarkable degree of faithfulness and sensitiveness of the Marees prints are the Renoir pastels and the Cézanne water-colours. With these it is almost impossible to detect the mechanical process, so fresh and spontaneous do they look. There is one particular Renoir pastel of a woman with a black toque which is by way of being a unique *tour de force:* colour and line alike might deceive the most exact or cantankerous of connoisseurs. There is, however, one snag in the show: all these facsimiles are German, and the astounding part of it is that they were made in the very heart of the war, in the very centre of Germany. How such skill—to say nothing of the scientific and chemical machinery—was then obtainable is a mystery, but it is even more of a mystery that, seemingly, no British reproductions can be made to match them yet, the next best processes being French and Italian respectively.

G. HOLT.

Steel Furniture for Bank Buildings, etc.

The application of steel for the construction of bank fittings, library shelving, office furniture, and equipment generally is of American origin, and was the direct outcome of the need for protecting documents and books from the ravages of fire.

As far back as thirty years ago it was realized by American bankers and the heads of the more important trading corporations that the frequent interruption to business caused by the destruction of vital records through fire was a problem which called for a prompt solution. Experiments were made with metal as the chief constructional element in a new type of furniture, and from the data yielded by these early models improved forms were evolved which speedily met with such a prodigious demand that a great steel furnishing industry was created.

The credit for introducing metal furniture into this country rightly belongs to Mr. James C. Sellers, who has been closely identified with its manufacture and development for the past twenty years. During fifteen of them he managed the Contracts Branch and Art Metal Department of Roneo, Ltd., with such success that the growth of the business following his control of the department has led to the formation of a separate company entitled the Art Metal Equipment Co., Ltd., and the appointment of Mr. Sellers as its managing director. Mr. Sellers has also joined the board of Messrs. J. Westwood & Co., Ltd., of Napier Yard, Millwall, the old-established and well-known firm of constructional engineers and bridge builders, who are largely interested with Mr. Sellers in the Art Metal Equipment Co., Ltd.

To the extensive engineering equipment already existing at Napier Yard has been added metal-working plant and special machinery for dealing with sheet steel, together with large ovens for stove enamelling, so that work of this character, which has previously gone abroad, can now be produced in England.

The manufacture and supply of complete equipments in steel, art metal construction work, steel doors, shelving, fireproof rolling shutters, and steel interior fittings will be continued by the new company on precisely the same lines as formerly, but in order to meet the larger requirements of the extending business, and to give the increased accommodation necessitated by it, new showrooms and offices, contained in a five-storied building, have recently been opened at 186-188 Shaftesbury Avenue, W.C.2.

It was here that the present writer sought out Mr. Sellers, and under his pilotage inspected a few of the more outstanding commodities in which the new company specialize. One of these consisted of a specimen length of enamelled steel desk—embellished with bronze ornament—which formed part of a large contract for a South American Bank. There was also to be seen a full-size model of the most recent steel construction adopted for a library book stack, complete with stairway and glass landing. Other fittings of steel were both numerous and interesting, and the key-note of all of them was the infinite care bestowed upon their design and their high finish.

When one considers the large sums which are expended on the construction of buildings, it certainly appears strange that so much property should be jeopardized by equipping them with inflammable fittings, when immunity from loss by fire—to say nothing of a 20 per cent. gain in space—may be secured by the instalment of steel furniture. Indeed, one gathered that at first Mr. Sellers found it very difficult to persuade English architects, librarians, and the officials of p companies and Government departm of the superior merits of steel.

To-day, however, thanks largely t enthusiasm and perseverance, the ciple no longer needs special pleading progressively inclined architects are first to admit that from every poi view the adoption of steel furnitur large commercial buildings bec almost obligatory.

There are two points of constru which especially deserve mention. is that all drawers and cases are double, so that air chambers are fo which possess remarkable fire-res qualities; and the other is that the drawers cannot warp or stick, be they are carried on suspension slides ball-bearing rollers. Even the he drawers can thus be operated witl the slightest effort, while their unus smooth running action is a featu itself.

A Fine Piece of Mod Craftsmanship

This excellent specimen of carving is the work of an able craf who recently died in somewhat n tous circumstances. It will be seen the illustration that this cleverly ex panel is very suitable for adaptat a war memorial tablet, on which r could be painted or inscribed; or overmantel to which a portrait or p could be added: or in which a could be inserted. The piece is f for the benefit of the carver's f and inquiries may be sent to the of the Journal.

AN EXQUISITE EXAMPLE OF MODERN CRAFTSMANSHIP IN THE GRINL GIBBONS TRADITION.

The Week's News

tirement of Mr. G. J. Townsend.]

G. J. Townsend is retiring from the cts' department of the L.C.C. after rears' service.

Doncaster Housing.

Ministry of Health have sanctioned of £12,000, at 6½ per cent., for g purposes.

Architectural Practice.

E. B. Musman, A.R.I.B.A., has nced practice at 5 John Street, d Row, London, W.C.

Sanatorium for Lochmaben.

Dumfries and Galloway Joint Sana- Board are to erect a sanatorium hmaben at an estimated cost of).

New Cinema for Glasgow.

James Boyd, of Glasgow, architect, pared plans for a picture theatre rge Drive, Linthouse, Glasgow. st is estimated at £29,000.

Retirement of Mr. A. Pollard.

A. Pollard, chief architect of the Eastern Railway, has retired, after ars' service, and the directors have ed Mr. S. Wilkinson, F.R.I.B.A., lon, as his successor.

5 Houses Completed at Preston.

Preston 235 houses, about half of tire scheme contemplated, have en completed and tenanted, and it ted that the remaining houses will hed by April.

rchitect's Change of Address.

.-Col. John Brown, D.S.O., D.L. B.A., Professional Associate of the ors' Institute, F.Inst.San.Eng., oved to 83 St. Giles' Street, mpton.

he Architecture of Glasgow."

meeting in Glasgow of the Archi- and Surveyors' Assistants, Mr. Macaulay presided. Professor Gourlay delivered an address "Notes on the Architecture of v."

New Dee Bridge at Chester.

cial meeting of the Chester Town is to consider recommendations Improvement Committee for the of a new suspension bridge over er Dee in place of the existing which it is believed has become

Graphs of Cottage Building.

Department of Scientific and In- Research hope to publish shortly, fficial publication of the Building h Board, a book entitled "Graphi- lysis of the Cost of Cottage Build- he volume will contain a number l diagrams based on official ex- spread over the past two or ears' work on the Government schemes.

1,200 Houses Completed at Sheffield.

Of the 1,993 houses in the Sheffield Housing Scheme, 1,179 have been completed up to the present and 623 are in course of completion. Sheffield and Birmingham are said to be the only two cities which have erected over 1,000 houses since the end of the war.

The New Premises for Lilley and Skinner.

Apropos the illustrated article on the new premises for Messrs. Lilley and Skinner in our issue for December 21, we understand that the shop-front and the interior equipment, as well as the art metal-work were executed by Messrs. Saml. Haskins and Bros., Ltd., of Old Street, London, E.C. 1.

Bradford Town Planning Scheme.

The Bradford Authorities have submitted to the Ministry of Health a map showing how the city will be affected by the nine sections of the town-planning scheme. The whole city, apparently, will be affected; recreation grounds, open spaces, new road systems, and the widening of existing thoroughfares are amongst the projected improvements.

Building Guild to do Private Work.

The National Building Guild, which was founded in Manchester nearly two years ago, claims to have contracts in hand in excess of £2,000,000, and is aiming at securing £5,000,000 worth of work this year, and £10,000,000 in 1923. The guild is definitely out for ordinary business, in addition to public contracts, and Guild committees are being enjoined to canvass for work.

The Late Mr. J. H. La Trobe.

It is with deep regret that we announce the death of Mr. J. H. La Trobe, F.R.I.B.A., of the firm of La Trobe and Weston, architects and surveyors, Unity Street, St. Augustine's. Mr. La Trobe was a well-known practitioner in Bristol, and a number of important buildings were erected under his or his firm's superintendence. He was only fifty-nine.

British Pavilion for Brazilian Exhibition.

The design chosen for the British Pavilion to be erected at the forthcoming Brazilian Centenary Exhibition is the work of Messrs. John W. Simpson and Maxwell Ayrton, FF.R.I.B.A. It is intended to be a permanent structure, and will be handed over to Brazil on the conclusion of the exhibition as a memorial of the occasion.

Houses by Direct Labour.

The Blackburn Housing Sub-Committee proposed to the Town Council, last January, that forty houses should be erected on the Intack site by the direct employment of labour. The committee believed this would accelerate the rate of building progress, and it was hoped to reduce the cost of such houses. The council agreed to make a beginning with forty houses. Quantities had to be got out, and the sanction of the Ministry of Health obtained, so that it was June before building began. Nine are now occupied, and the remaining thirty-one are nearing completion.

Proposed Severn Bridge.

Schemes for providing employment at Worcester include the construction of a new bridge over the Severn, for road and foot traffic. There are three schemes for a new bridge, one about two miles north of Worcester, another about the same distance south, and a third about one hundred yards from the present bridge. Alternatively it is proposed to widen the existing bridge.

Crabs and Concrete.

Crabs which are common in the waters of Florida have been found to be capable of crushing concrete as if it were chalk. The discovery was made recently by contractors engaged in sheathing the piling of a bridge across Boce Creiga Bay, near St. Petersburg, Florida, who were mystified by the holes and cracks which appeared in the concrete piling near the channel. In future the contractor will sheathe the piling in and near the channel with sheet iron.

The British Empire Exhibition.

The first £900,000 has been guaranteed for the building of the British Empire Exhibition. The buildings in Wembley Park will be the finest of their kind in the world, and they will be permanent. From the entrance by Wembley Station the ground ascends beyond the lake to the crest upon which will be erected the Stadium. Between the lake and the Stadium are to be the exhibition buildings, covering eighteen acres, with their aisles of a hundred feet span.

Building Prices and Research.

In order to discover some means of increasing and cheapening the supply of Portland cement, experiments are being made by experts associated with the British Engineering Standards Association. The object of the research is to ascertain whether cement made from blast-furnace slag cannot be made according to a recognized specification which would enable it to be used for work in which Portland cement, manufactured according to the British standard specification, has hitherto been employed.

Plea for the Small Builder.

Mr. J. H. Blizard, in the course of his presidential address to the Institution of Sanitary Engineers at the Caxton Hall on January 4, declared that the housing shortage could be remedied by the re-employment of the speculative builder. He hoped that Sir Alfred Mond would look into the pre-war history of housing for the working classes, in which event the Minister of Health would find that the much-maligned speculative builder, or "jerry builder," was the man who supplied the houses, and would save the situation now. But if the little builder was to revive he must be assisted by the Government. The value of a house when completed could be ascertained with a fair degree of accuracy. This was what the little builder wanted to know. Once satisfied on this point, he should be advanced 60 per cent. of the value of the house to be built, and then he would build. The worst that could happen

under this arrangement would be that a few houses might be thrown on the hands of the Government to be completed and sold, and even then no money would be lost, because only 60 per cent. of the value would have been advanced. If this were done he claimed that the housing question would become a simple, economical, and practical proposition, and would also cut down considerably the cost of administration.

New Public Halls, Blackburn.

With regard to the article on the above building which appeared in our last week's issue, we have been asked to add that the heating system throughout was installed by Messrs. Saunders and Taylor, of Manchester. Messrs. H. H. Martyn & Co., of Cheltenham, executed all exterior stone carving, as well as oak panelling, seating, and furnishing in the council suite, including special chimneypieces. The British Luxfer Prism Syndicate supplied pavement lights and skylights, in addition to the metal casements in the council chamber.

Irrigation in Queensland.

Good progress has now been made with an irrigation scheme in the Inkerman district of Queensland, estimated to cost £400,000, of which about half the money has already been spent. So far 120 wells have been sunk, of which 50 have been tested, and 23 found to be defective owing mainly to the strata. The total available acreage for irrigation under the present scheme is 10,500, but 57,000 acres are in the gazetted boundary. The scheme, which is under Government control, is expected to be completed in four years' time. Speaking generally, Queensland is watered by numerous permanent rivers and creeks, while in the western portions of the State there are several thousand sub-artesian and artesian bores, which provide a superabundance of water for stock.

Newcastle Quayside Extensions.

During 1921 the important work of extending the Newcastle Quayside has been put in hand, and the new structure may be available during the coming twelve months. The scheme was drawn up by the City Engineer, Mr. W. J. Steele, and was estimated to cost £240,000. The quay itself, which is the principal portion of the work, will consist of reinforced concrete, and has been commenced. The members of the structure have been fabricated, and a start has been made with the work of placing the members in position.

New Housing Regulations.

The Minister of Health, in pursuance of his powers under sub-section (1) of Section 7 of the Housing, Town Planning, etc., Act, 1919, has made the following Regulations :—

1. These Regulations may be cited as the Local Authorities (Assisted Housing Schemes) Amendment (No. 2) Regulations, 1921.

2. The following paragraph shall be substituted for paragraph (5) of Article III of the Local Authorities (Assisted Housing Schemes) Regulations, 1919 :—

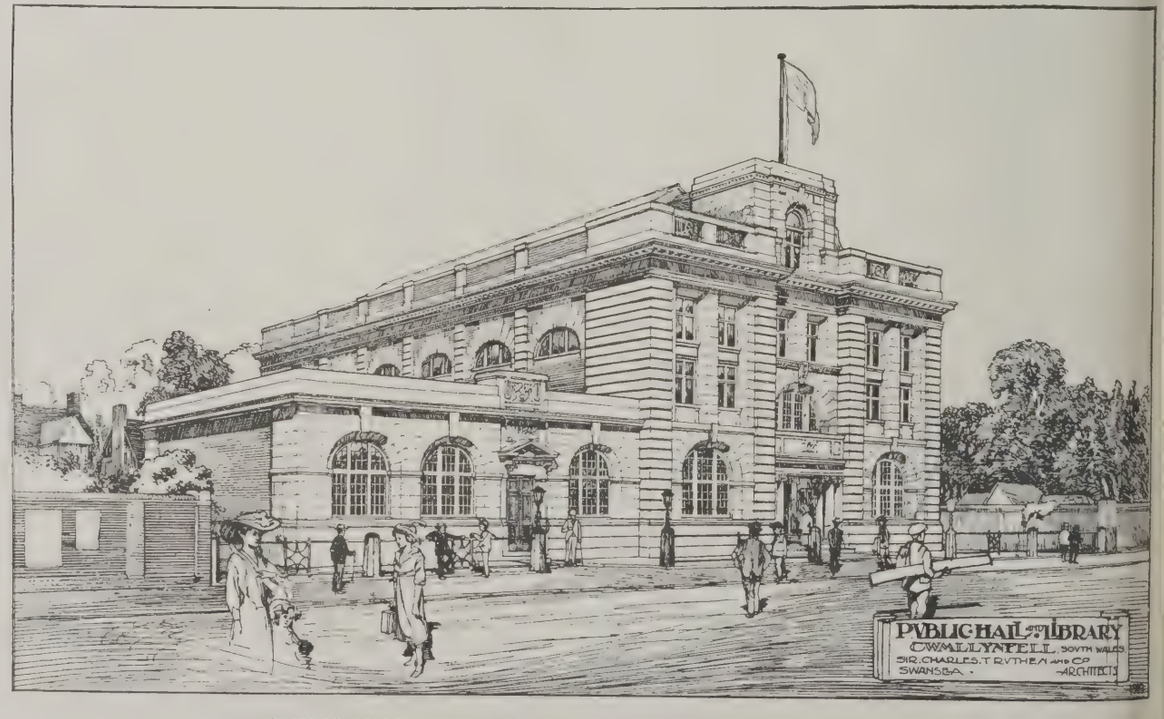
"(5) An assisted scheme or part of an assisted scheme shall be deemed to have been carried into effect at the date on which all the houses to be provided or acquired thereunder are let or available for letting, or on which the final expenditure authorized by the Minister for the purpose of carrying the scheme or the part of the scheme into effect is incurred by the local authority, whichever is the earlier date."

Builders' Hardware, etc., required in Tripoli.

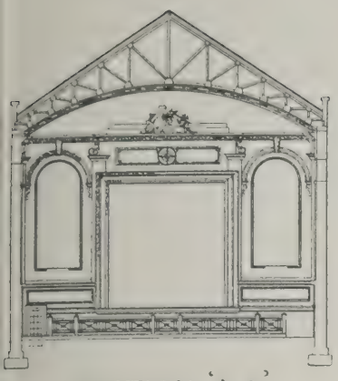
It is reported to the Department of Overseas Trade that certain buildings are in course of erection or are projected in Tripoli, for which iron girders, ready doors, with locks, handles, and might possibly be imported fro United Kingdom. The report me the following buildings to be erect the local Government : Customs houses and lodging-house for C employés, and two large school contract for one of which has awarded to a local firm. In addi large lodging-house for artisan already been commenced by a local firm. Besides these there ha erected a theatre for which interi niture and fittings are required. ject is before the proprietors of the t for the addition thereto of an h 100 rooms and bar. The name addresses of the authorities and fi Tripoli concerned in these contra whom United Kingdom firms inte could submit price lists, etc., c obtained by United Kingdom fir application to the Department of seas Trade (Room 84), 35 Old Street, S.W.1, quoting the ref DOT/6814/FIE/PN.

A Welsh Public Hall Library

The illustrations on this and pa depict the new Public Hall and L at Cwmllynfell, South Wales, re erected from the designs of Sir C Ruthen, F R.I.B.A. The entrance hall is through a vestibule which co with the library, billiard-room, comm room, and men's lavatories, under there is a basement used as a heatin generating chamber. There is a se entrance to these rooms on the façade of the building, the leng which is about 80 ft.



PUBLIC HALL AND LIBRARY, CWMLLYNFELL, SOUTH WALES
SIR CHARLES T. RUTHEN, F.R.I.B.A., ARCHITECT.
(*See page 121*).



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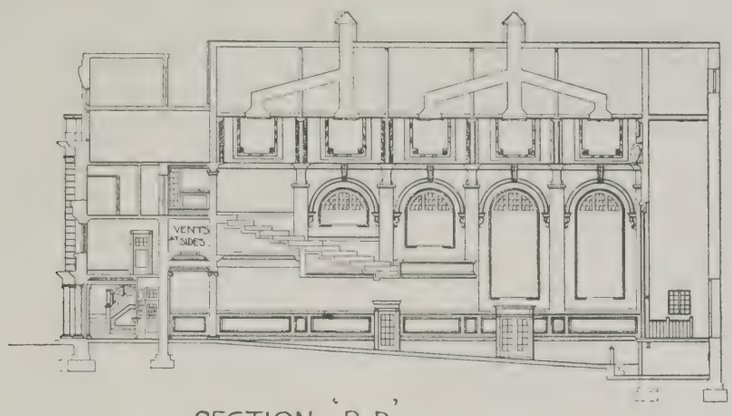

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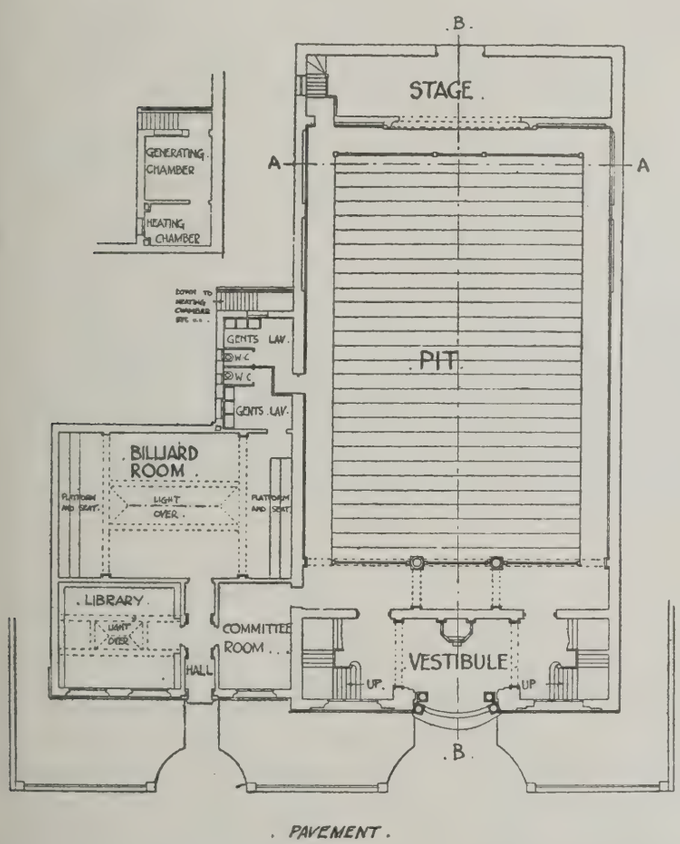
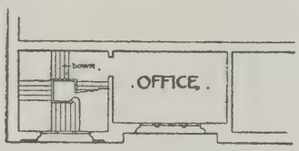
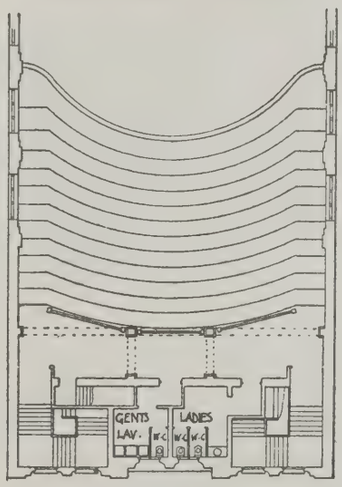


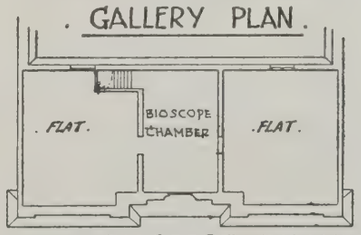
GROUND FLOOR PLAN.



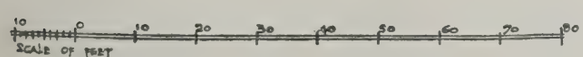
MEZZANINE FLOOR.



GALLERY PLAN.



BIOSCOPE CHAMBER



PUBLIC HALL AND LIBRARY, CWMLLYNFELL, SOUTH WALES
SIR CHARLES RUTHEN, F.R.I.B.A., ARCHITECT.

(*See also page 120.*)

Competition Award

Bengal Legislative Building.

Mr. H. A. Crouch, consulting architect to the Government of Bengal, the assessor, has made the following awards in the Bengal Legislative Building Competition: First, John Greaves, India (premium £500); second, Messrs. Maffey and Morgan and Messrs. Armstrong and Dawson, joint architects, London (premium £250); third, Messrs. Forbes and Tate, London (premium £100).

Coming Events

Wednesday, January 11.

Institution of Civil Engineers.—Students' meeting, 6 p.m. Lecture on "The Economic Aspects of Various Methods of Power Transmission." By E. W. Monkhouse, M.A., M.Inst.C.E.

Industrial League and Council.—Meeting at Caxton Hall, 7.30 p.m. Paper by Mr. Robert Stilling on "A Fair Day's Work for a Fair Day's Pay."

Thursday, January 12.

Society of Architects.—Annual general meeting, 8 p.m. Discussion to be opened by Sir Charles Ruthen, F.R.I.B.A., on "The Architect and the State."

Friday, January 13.

Royal Technical College Architectural Craftsmen's Society, Glasgow. — Open night.

Wednesday, January 18.

Industrial League and Council.—Meeting at Caxton Hall, 7.30 p.m. Paper by Mr. Robert Young, O.B.E., M.P., on "Use and Abuse of Combines and Trusts."

Latest List of New Inventions

Latest Patent Applications.

34131.—Albrecht, T. J. J.—Building construction. December 19.

34387.—Aston, T.—Wharf wall, etc. December 21.

34567.—Baines, J. S.—Interior walls of buildings, ceilings, and roofs. December 22.

34617.—Dickinson, A. W.—Combined hollow-tile and reinforced concrete floors and ceilings. December 23.

Specifications Published.

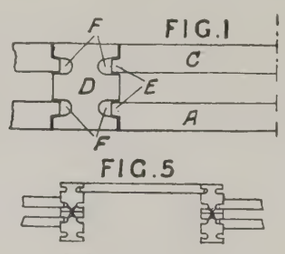
172365.—Crompton & Co., Ltd., and Jones, W. F.—Means for securing metal or other bodies to slabs or blocks of insulating or other material.

172474.—Higgs, W. E., and Drew, A.—Scaffolding for building purposes.

172475.—Hesselman, B. O. W., and Mattsson, O. M. G.—Machine for manufacturing hollow building blocks.

Abstract Published.

171225.—Walls.—Heaven, F. H., 39 Coronation Street, Aberkenfig, Glamorgan.—Hollow walls are formed of slabs A, C rabbeted to engage in grooves in pier blocks D, the grooves being splayed and sunk with rounded bottoms

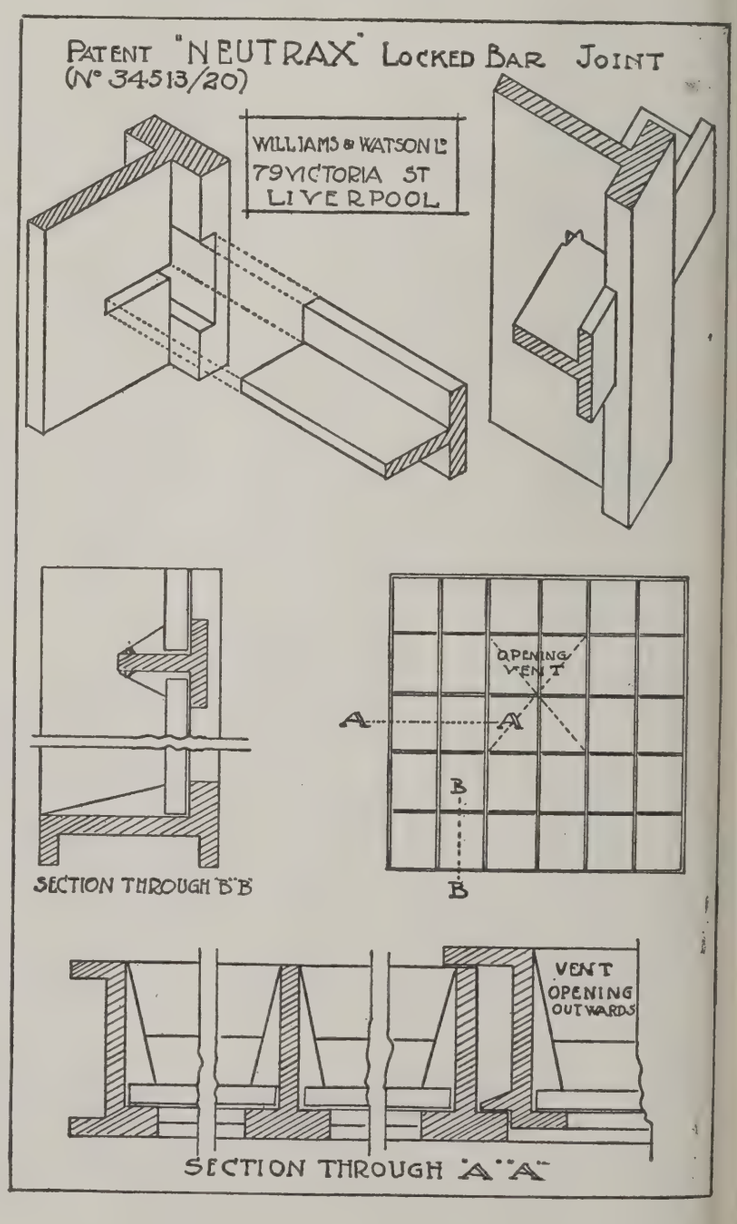


and deeper than the ribs E, so that spaces F are formed, into which metal bars may be inserted. Similar blocks and slabs may be used in constructing chimney flues and recesses for fireplaces, as shown, for example, in Fig. 5. The recesses may be in pairs side by side, or back to back, and iron bonds may be used in the joints of the pier blocks.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

Metal Sashes—A New Joint

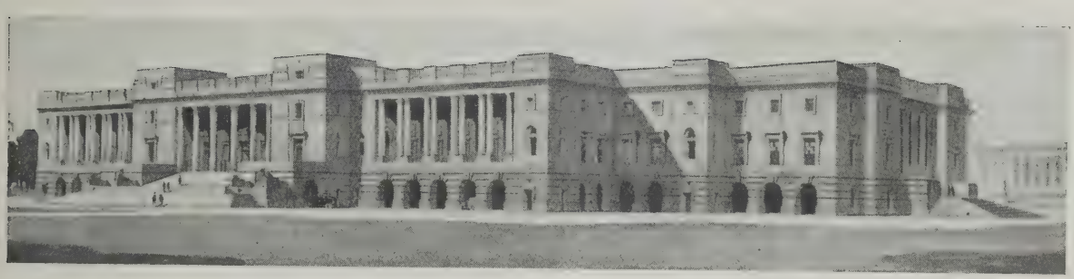
The accompanying illustration a new bar joint for metal sashes, as the "Neutrax" Locked Bar which has been recently patent Messrs. Williams and Watson, L 77–79 Victoria Street, Liverpool chief superficial difference betwee joint and others is that the vertic are of deeper section, and are const of metal with thicker glazing flange the horizontal bars, or vice vers the name implies, the neutral axis heavier bar is slotted and the cer the web cut away as well as the inn tion of the glazing flanges (whe metal is of little use), thus leaving and in their natural shape the fit the section at both its outer edges. allows the lighter bars to be th through without cutting them in an and by burring their webs at each the whole sash is locked with p rigidity.



dnesday, January 18, 1922. Vol. LV. No. 1411

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"



NEW LEGISLATIVE BUILDING FOR BENGAL.

This illustration shows the winning design in the Bengal Legislative Building Competition, assessed by Mr. H. A. Crouch, consulting architect to the Government of Bengal. The successful architect is Mr. John Greaves, who has been awarded the first premium of £500; the second premium of £250 having been gained by Messrs. Maffey and Morgan and Messrs. Armstrong and Dawson of London. Messrs. Forbes and Tate of London were third, with a premium of £100. There were fifty-two competitors.

27-29 Tothill Street, Westminster, S.W.1.

Fountains. 6.—Fontaine Joyeuse, Rue de Turenne, Paris

Paris is rich in fountains. They are there very numerous, some are very nobly conceived works of art, and several are commemorative of some celebrated event or person—for instance (to cite a topical example), there is the Fontaine Molière, opposite the house where the great man died. The Fontaine Joyeuse here depicted is one of many that are let into a niche in a building. It is situated in the Rue de Turenne, and is remarkable for its classical setting.

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Notes and Comments

The Larger London Movement

In various outlying districts proposals for a larger London find but little favour. Protests against absorption are heard at almost every borough council meeting. Local councils do not like to part ith the dignities, the patronage, the emoluments that ccrue to one's distant relations who, under the resent system of local self-government, can be ibbed into well-paid positions. Certainly there are, need not be said, much more worthy motives for urdy refusal to be swallowed up by an overgrown and ossibly hectoring and tyrannical central authority. There , for instance, local pride, an excellent civic virtue when ot carried to ridiculous excess. It leads to emulation, for ample, in the building of a town-hall that shall rival that the neighbouring borough. Of course, some sort of a cal town-hall would be necessary under any imaginable stem of municipal government; but who could take any ide in it if it were merely subservient to the London unty Hall? Some of the shabby huts that are about to e cleared out of St. James's Park would do well enough r a mere local committee, having at its head no mayor, insignia of office, no authority for wasting the rate-yers' money. These denudations are not very likely to cur. It is well that they should not; for corporate eling, and the efficient local self-government it implies, pend so much on externals, on ceremonial observances, d harmless little affectations, assumptions, and official nctions, that the soul and spirit, enterprise and initia-ve, would forsake a body rendered so powerless and inert. efore the principle of centralization is accepted it will be cessary to convince the local councils that they are not be ruthlessly shorn of power and prerogative, honour d glory. Yet municipal reform is greatly needed, the esent system being antiquated, inefficient, inequitable, d uneconomical. This has been for a long time clearly ident to the most casual observer, and the facts have been phasized in the evidence of witnesses appearing before e Royal Commission on London Government now sitting the Westminster Guildhall; but one of the witnesses—mely, Mr. F. Hunt, valuer to the London County uncil, and head of the Valuation, Estates, and Housing partment of that body—expressed opinions that should ay the misgivings of the citizens of Outer London. It is ue that he urged that "the central authority should ssess some sort of power directed to securing uniformity assessment throughout its area," and that there should "a single consolidated rate, a uniform form of demand te, a uniform form of rate-book and rate-collection count, and a system of equalization of rates." After the plar incident the equalization of rates is an inevitable ue; but it will not commend itself to the outlying dis-cts, because, as Mr. Hunt deposed, "The London rate-yers are, in effect, making a large contribution to the tes of the districts outside London," and other local thorities have a large amount of property outside the unty of London. A reason for centralization that must rry considerable weight in any reasoned and impartial survey of the whole situation is the question of town-planning authority. Outside London the councils of boroughs and urban and rural districts are the town-planning authorities, the county councils having no jurisdiction in the matter—a state of affairs that is often the undoing of amenity. With no central authority having statutory powers to enforce uniformity, it is possible for one local authority to oppose and thwart the interests of its neighbours; as in the case of a certain borough in south-east London which for months, and even for years, held up a much-needed tramway scheme by refusing to let the lines pass through a mile or two of territory over which it had jurisdiction. More recently, in the same district, a promising "garden suburb" scheme was wrecked through the refusal of one of the councils—probably the one that would have derived most benefit from it—to co-operate in it; the reason for the abstention being expressed in the parroted formula "Why should we pay for sending away householders now paying rates to us into a district in which they will pay rates to a different authority?" Short-sighted and selfish as it was, this line of reasoning burked the scheme. It is because uncurbed cantankerousness is so potent for mischief, and is so much more apt to arise parochially than imperially, that one would fain hope that a larger London would bring larger views.

A "Height of Buildings" Farce

When the Crown is at loggerheads with the L.C.C. about the height of buildings, what is to be anticipated as the result of so Homeric a contest? Neither combatant will be seriously wounded, but building interests are likely to be hard hit by both. It is an absurd dispute. Messrs. Harrods, Ltd., proposing to build on the Swan and Edgar site in Regent Street, facing Piccadilly Circus; Crown, as ground-landlord, insists that the building they propose to erect shall be 100 ft. high, to conform with the general scheme adopted for the reconstruction of the Regent Street Quadrant. This height contravenes the by-law of the London County Council, which limits the height of the top floor of drapery stores, and the like, to 60 ft., with a height of 72 ft. to the ceiling of that floor; while the crown of the roof could rise to a height of 100 ft. from the ground. (For office buildings the external walls may be 80 ft. high, and above that height there may be two stories in the roof.) Hitherto the Council has refused to relax in this instance a by-law made for the protection of human life from fire; but this refusal does not seem to accredit duly the improved means of fire-preventive building that have become available since the by-law was passed. Naturally the L.C.C. shrink from incurring responsibility for such terrible disasters as have occurred in the past under conditions that are now confidently stated to be obsolete; and, moreover, they no doubt feel that to relax the by-law in one instance would be to open the sluice-gates to an irresistible rush of further demands for preferential treatment. Their reluctance, therefore, is perfectly easy to understand; but surely there should be some technical and otherwise competent court of inquiry to which they could confidently refer such

cases, and behind which they could shelter themselves in either of the contingencies mentioned. It is distinctly unfair to all the parties to such cases that the decisions in them should wear the appearance of being arbitrary and perfunctory, or should ever, as in the present clash between the Crown and the L.C.C., assume the features of a serio-comic farce, enacted in restraint of trade to a bored and bewildered but patient and long-suffering audience.

Piccadilly Changes and Chances

What will happen to the Stratton Street corner of Piccadilly? The site, having a frontage of 100 ft. to Piccadilly, and of 210 ft. to Stratton Street, is at present occupied in part by the Burdett-Coutts town house, and in part by premises rented by the Royal Thames Yacht Club. It is announced that the freehold will be sold at the beginning of March, and the impending change of ownership is certain to have far-reaching effects on the street architecture of the district, where type and scale are sure to be changed drastically, the "note" of the sedate town mansion being succeeded by the more strenuous style appropriate to business premises. It is by no means suggested that these are likely to be big and blatant; they may be the former without being the latter, if the right architect is commissioned. Upon him, whosoever he may happen to be, will rest the responsibility of interpreting the requirements of his client in terms of an architecture that shall be a credit to its somewhat exacting environment. It is a great opportunity, and a powerful incentive to design something exemplary.

Comparative Costs of Building

Relativity (of sorts) seems to have given a new lease of life to the old pseudo-scientific doctrine "Examine and compare." Sometimes the comparisons are odious, especially when they show, by analysing costs, that some class of worker, or some kind of trader, is responsible for more than his fair share of the cost of building. Such tabulated results as we give in another part of the present issue apportion the guilt for high prices impartially and irrefragably, by showing where the money goes, or rather, in what proportions it is spent on the multifarious departments into which building operations are divided. These hard facts, coupled with the carefully calculated constants of which a whole bookful came up for review in our issue for last week, put the issue, if not beyond controversy, at all events on a substantial basis for it. There is (for "it never rains but it pours"), furthermore, the testimony of the report of the Building Research Board on the Cost of Cottage Building. This has been pounced upon by a writer in the "New Statesman" as showing that rings of certain material-vendors are chiefly to blame, and that "the attempt to impute high costs to the price of labour is met by the figures given in the report," which, however, does not establish the worker as an injured innocent, entirely free from guile. Hitherto, unhappily, "Ca' canny" seems to have qualified for a position among the constants, and has had to be reckoned with in any cautious estimate of costs.

Are We Philistines?

There is hope for Architecture! We have it on the very respectable authority of a leader-writer in "The Times" that "we are not Philistines." He was prompted to take this charitable view after reading the address to an assembly of Art Masters by the President of the Board of Education. Mr. Fisher, we know—and we should be very thankful for the fact—is a confirmed optimist; and he told the Art Masters "that Englishmen are not natural and ineradicable Philistines." It must have been almost incredible news to most of them; "and to bear it out, Mr. Fisher not only cited our various artistic achievements in the past, but was able to add that in certain crafts—printing, for instance—there had been, in his opinion, a notable improvement in recent years." That is undeniable. The British School of Printing is for the moment supreme; and letterpress printing has reacted on lettering, fascia writing, and other matters that pertain to the decoration, if not the design of buildings. Excellence in one art or craft is an incitement to emulation in another, and in this matter very small things count. "On the other hand," Mr. Fisher said, "we lag behind other nations in industrial design"; and he encouraged his hearers to form high ideals of their mission as trainers of competent craftsmen. It was a word in season, and should give a considerable impetus to the movement that has for its object the application of art to everyday things. Are we Philistines? The answer is in the negative.

A German Business "Offensive"

A correspondent has been good enough to send us a postcard that he has received from a Berlin firm of door and window specialists. It is an excessively ugly card, the lettering with which it is "strafed" being quite gorgeously and gratuitously hideous, while the illustrations of doors and windows are truly Teutonic in design and tint. What is of importance, however, is the fact that the announcement of the firm's desire to export doors and windows is printed in five different languages on the face of the card, in the order here given—Dutch, English, French, Spanish, and Italian. Presumably, therefore, the firm intends to distribute its ugly card among the unfortunate inhabitants of the five countries indicated, and the moral seems to be that British traders should emulate the energy (but by no means the art) of the pushful German who seems determined to capture all the business that an ugly postcard will secure him on the Continent of Europe and in these Islands. Probably the postcard is merely an advance agent, to be followed by further "shock offensives" in five languages. Our own traders will, if they are wise, take effective measures for a counter-movement; but they will not be so foolish as to regard poorly printed postcards as an effective means of publicity.

Sir C. Ruthen on Housing

Sir C. Ruthen's impeachment of the architectural profession will raise a storm of indignation. A report of his unfortunate speech appears in a later portion of this issue, together with some criticisms of it made on the spot by members of the Society of which he is President. We regard his speech as indiscreet, ill-timed, and mischievous, and likely to bring the profession into undeserved discredit. We therefore wish to dissociate ourselves entirely from the extraordinary views which Sir Charles Ruthen expressed, nor do we agree with the laudatory terms in which it is introduced by the contributor whose initials it bears.

Local versus Central Heating

Central-heating advocates may receive a momentary shock from a suggestion contained in the report (issued last Tuesday) of the Medical Research Council. The reporters think it possible that some day the heating of workshops will become unnecessary, because each person will be provided with an electrical source of heat, which will be under individual control. When this ideal system materializes, the architect will not have to determine whether of the heating trio, the gasfitter, the electrician or the hot-water engineer, shall be accorded the honour of disfiguring his building with their chasings and casings; he will simply dispense with them all as far as heating is concerned, although lighting must still compel him to choose one of two evils. But the vexed questions of high pressure or low-pressure, steam or hot water, single pipe or flow-and-return, will not worry him; and there will be no more jangling discord as to whether the railway carriage window shall be "up" or "down," or the room window open or shut, save when "windage" must be taken into account. But the advent of this apotheosis of local heating is not yet; so one need not discuss the project more seriously than at the present stage it seems to deserve.

Housing and Housing Fees—II

(Specially Contributed)

T was stated in the preceding article that no Memorandum had specifically taken into account the questions that would arise in connection with fees if housing schemes were abandoned. The word "specifically" deliberately employed because both in Memorandums s. 4 and 31 this paragraph does appear: "The conditions engagement of architects and surveyors shall be those ch are customary in the respective professions; for mple, generally such as the conditions prescribed by Royal Institute of British Architects."

his paragraph cannot be assumed to have been lightly orted into the Memorandum without due regard to its ct; and to see what that effect is, it is necessary to turn he conditions referred to.

hey are embodied in the "Scale of Professional Charges" he Royal Institute of British Architects, first issued in 2; revised in 1898 and 1919. This "Scale of Charges" ivided into two parts, the first headed "Conditions of gagement," the second "Scale of Charges," and it may contended that the paragraph in the Memorandum only orted the first division and not the second, not only the ground that only the part headed "Conditions of gagement" is mentioned, but also on the ground that succeeding "Scale of Charges" is superseded by that forth in the Memorandums. As against this it will be n on reference that the first paragraph of the "Conditns of Engagement" sets out that the architect's "reneration is payable according to the Scale of Charges einafter stated, which scale is fixed and accepted on the is of the same conditions," and that on July 8, 1920, en Memorandum No. 31 was issued by the Ministry of alth, the "Scale of Professional Charges" of the Royal titute of British Architects then in force in fact incorated the "Scale of Charges" of the Memorandum, and, *addition*, contained Clause 5 dealing with the subject of ndoned work, for which the "Scale of Charges" in the morandum made no provision. It may be useful to set the Clause as it appears:—

"Clause 5.—If the project or part of it be abandoned, or if the services of the Architect cease or are dispensed with before a Contract is entered into or order given, the charges in respect of the works abandoned or for which the Architect was employed (as the case may be) are as follows:—

"(*a*) For taking Client's instructions, preparing sketch design, and making approximate estimate of cost by cubic measurement, or otherwise, one-fourth of the percentage stated in Clauses 1 or 2 (as the case may be) on the estimated cost of such works.

"(*b*) For taking Client's instructions, preparing sketch design, and making drawings and particulars sufficient to enable quantities to be prepared or a tender obtained, two-thirds of the percentage stated in Clause 1 or 2 (as the case may be) on the estimated cost of such works."

lause 5 (*b*) of the "Scale of Charges" of the Royal titute of British Architects, if applied to the fees payable ler General Housing Memorandum No. 31 of the nistry of Health, would give the fees payable as follows:—

Scheme of	250	houses	£2,862
,,	500	,, ...	5,294
,,	750	,, ...	7,726
,,	1,000	,, ...	9,158
,,	1,250	,, ...	10,718

t should be borne in mind that contracts with local horities are invalid unless sealed; but where agreements e been made between individual architects and local horities under seal, on the basis of either Memorandum 4 Memorandum 31, it is a nice legal question as to whether al authorities are not bound by Clause 5 (*b*) of the "Scale of Professional Charges" of the Royal Institute of British Architects. In any event, architects may rely on due weight being given to this factor in any further negotiations that are to take place.

Had all gone well with housing, this careful balancing of points would not be needed; schemes would have been completed, architects would have been paid, and all would have been for the best possible in the best of all possible worlds. But a change came o'er the spirit of the scene. The German indemnity was not forthcoming, trade fell off, unemployment loomed, revenue declined, and housing looked a luxury that must be forgone. A Cabinet reshuffle took place; Dr. Addison went out, and Sir Alfred Mond came in. Housing was to be rationed, housing schemes were to be abandoned, housing sites were to be sold. No million houses were to be built, not 800,000, not half a million, lucky if we got 200,000. The axe was laid at the root of the housing tree, and architects roosting in its branches came down with the rest. Contracts had to be cancelled. Cancelling means compensation. What compensation was to be paid to architects?—that was the question now for the Ministry to settle. Once more the summons went forth, once more the representatives of the Institute repaired to the conference table at the Ministry of Health. In April and May they met—this time Sir Charles Ruthen on the other side of the table, a difficult and delicate position, charged at once with the proper care of his profession's interest and a right regard for the public purse. The negotiators at length agreed, and on May 23 the Council of the Institute accepted a Scale of Fees for abandoned work, and on June 8, 1921, it was issued by the Ministry of Health as General Housing Memorandum No. 52 accompanied by Memorandum to Housing Authorities No. 51 (D). What was agreed to under this scale? This was agreed—that instead of basing the fees on the number of separate houses that were to be erected under a scheme, the fees were to be based on the number of separate designs which had been prepared, the material words for comparison with Clause 5 (*b*) heretofore referred to being:—

"1. In cases where the employment of the architect is discontinued on the abandonment of the plans, the fees payable for the abandoned work shall be as follows:—

"(i) If only sketch plans have been prepared, one-half the scale fees, under heading C in Memorandum No. 31, calculated in accordance with paragraphs (*b*) and (*c*) above.

"(ii) If all the work necessary for the purpose of obtaining tenders, including the preparation of detail drawings, has been done, the full scale fees, under heading C in Memorandum No. 31, calculated in accordance with paragraphs (*b*) and (*c*) above.

It is not easy to make an estimate of the fees that would be payable on such a basis; but, on the assumption that in a scheme of 250 houses four types are used and three separate designs of each type made, twelve separate designs in all, and that for each extra 250 houses twelve more separate designs are made, and allowing £900 as the maximum amount per house on which fees would be calculated, the fees payable would appear to be as follows:—

On Sec. III, Clause 1 (ii) *of Memorandum No.* 52.

Scheme for	250	houses, separate designs	12	..	£540
,,	500	,, ,, ,,	24	..	810
,,	750	,, ,, ,,	36	..	1,080
,,	1,000	,, ,, ,,	48	..	1,350
,,	1,250	,, ,, ,,	60	..	1,620

If the number of separate designs were more or less, the fees would vary accordingly. It is probable that the assumptions made give fees payable in excess of those that

could in the majority of cases actually be charged. It will be seen that the difference between fees calculated on Clause 5 (*b*) of the Royal Institute of British Architects' Scale and Clause 1 (ii) of the Ministry of Health Scale *is very large*. In the case of :—

A scheme of	250	houses	the difference amounts to	£2,322
,,	500	,,	,,	4,484
,,	750	,,	,,	6,646
,,	1,000	,,	,,	7,808
,,	1,250	,,	,,	9,098

There can be little surprise that such an agreement caused the greatest disappointment to architects affected, and aroused real resentment. This was shown at a meeting of the general body, when ratification was refused. Subsequent negotiations with the Ministry led to a special general meeting being called on November 28, 1921, at which the following resolutions were adopted :—

"1. That while reaffirming the objections to Memoranda Nos. 51 (D) and 52, which led to the resolution of July 4, 1921, this Meeting recognized the bona fides of the Ministry in putting forward Memoranda Nos. 51 (D) and 52, under the impression that the R.I.B.A. had agreed thereto.

"2. That the Ministry of Health be requested to amend and re-draft the terms of the engagement of architects in connection with housing schemes in conjunction with accredited representatives of the Royal Institute.

"3. That for this purpose three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work and upon the matters referred to in the Second Resolution within limits prescribed by the Practice Standing Committee in consultation with interested architects.

"4. That the names suggested, namely, those of Messrs. W. R. Davidge, Herbert A. Welch, Francis Jones, Sydney Perks, Wm. Woodward, H. T. Buckland, and Courtenay Crickmer be referred to the Practice Standing Committee, and that the Committee be requested to consider these names and others, and to submit six names to a General Meeting of the Royal Institute with a view to the selection of three of them by ballot."

At a subsequent meeting Messrs. Herbert A. Welch Francis Jones, and H. T. Buckland were appointed t negotiate with the Ministry, with full powers to make a agreement.

In the first blush of resentment it was suggested tha the Ministry of Health had been guilty of somethin like sharp practice in stating in Memorandum 51 (D that the terms had been agreed by the Royal Institut of British Architects when in fact they still awaite ratification.

Some colour is given to this charge by the fact that thi appears to be the only Memorandum in which reference i made to any agreement with the Institute; but an impartia survey of the whole course of negotiations shows that th Ministry had reasonable grounds for believing that it ha in fact secured the concurrence of the Institute. I support of this it will be observed that Memorandum No. was issued by the Ministry of Health in September 191 although not ratified by the general body of the Roya Institute of British Architects till December 1. The Memorandum No. 31 was issued on July 8, 1920, and th general body was called to ratify it on November 29, 192 In these circumstances the Ministry may be excused, an in fact have been, for thinking the Institute negotiator were plenipotentiaries, and could make a final agreemen The position now is that the general body have agreed t the Practice Committee of the Institute laying dow certain limits within which the negotiators may make settlement with the Ministry, and architects whose fees a affected must abide the result. They may, I think, fe sure that not only will the Practice Committee carefull protect their interests, but also that in Sir Charles Ruthe they have a man who appreciates what is fair and prop to his professional brethren. The Architectural Professio has no desire to be charged with profiteering; on the oth hand, the profession is not entitled to acquire a reputatio for general benevolence at the undue expense of a number its members. A contretemps having occurred, it behov the negotiators to inform themselves of the full legal righ of those on whose behalf they act, and, armed with th knowledge, to come to an agreement which will satisfy th spirit of equity if to some degree it abandons the righ of law.

New Bank at Golders Green

OUR plates show two views and a detail of new premises for the London Joint City and Midland Bank, which have just been erected from the designs of Mr. T. B. Whinney, F.R.I.B.A., at the junction of the Golders Green and Finchley Roads, opposite Golders Green Station. The interest of the site, beyond the fact that it is a corner one, lies in the solution of the difficulties raised by the acute angle made by the intersecting roads. This presents obvious difficulties if the architect's conditions require a right-angled building. A square building, for instance, is out of the question, unless the architect is willing to set it back some distance from the corner, in which case the whole corner area of the site is wasted. The logical course, and the course which Mr. Whinney has followed, is to design a long narrow building with an important frontage to one road, and a small frontage to the other. The architect is then able to bring his building close up to the corner of the street, and also, by making that end circular, to let it follow, roughly speaking, the bend of the road. In this way little or none of the site is wasted in pavement area, etc.

Apart from this difficulty the site is an exceptionally good one. Roads leading to Hampstead Heath and to the station, as well as the Golders Green and Finchley Roads, radiate practically from the point upon which the Bank stands, there being also a garden of sorts on the other side of the street. In this way a large open area is obtained from any point within which one can see the bank in three dimensions. That is to say, one can appreciate it as piece of architecture rather than as a piece of flat desig Of this fact the architect has taken careful note, and b judicious handling of his materials—brick and stone—h been able to obtain a fine contrast in colour. The circul front facing the Golders Green Road he has constructe entirely of Portland stone. This consists of the Bar entrance, with semi-circular head and a massive fanligh surmounted by a carved shield and enrichment, and flanke on each side by a pair of coupled Ionic columns, betwe which are windows protected by sturdy metal grilles. O the side facing the Finchley Road, however, Mr. Whinn has introduced a treatment of red brick pierced by sto pedimented windows, and framed by stone channelled pier and the contrast between the mass of red brick on th façade and the mass of Portland stone on the entran front makes one of the most effective features of th design. Finally, to avoid any appearance of disconnectio the building is tied together by a Portland stone balustrad entablature, and plinth.

In the Banking Hall the architect has obtained a feelin of richness by employing the plain white surface of the wa which are of Keene's cement, to act as a relief to a decorat fibrous plaster ceiling and to fittings of polished walnu The circular entrance to the bank makes, as our illustr tion shows, a rather delightful feature of the interi Particulars of the contractors engaged on the work a published on page 136.

Bank, Golders Green : Façades to Golders Green Road and Finchley Road

T. B. Whinney, F.R.I.B.A., Architect

The red bricks seen in the Finchley Road façade make an effective contrast in colour with the Portland stone pedimented windows and entrance front. The building is 70 ft. 10 in. in length.

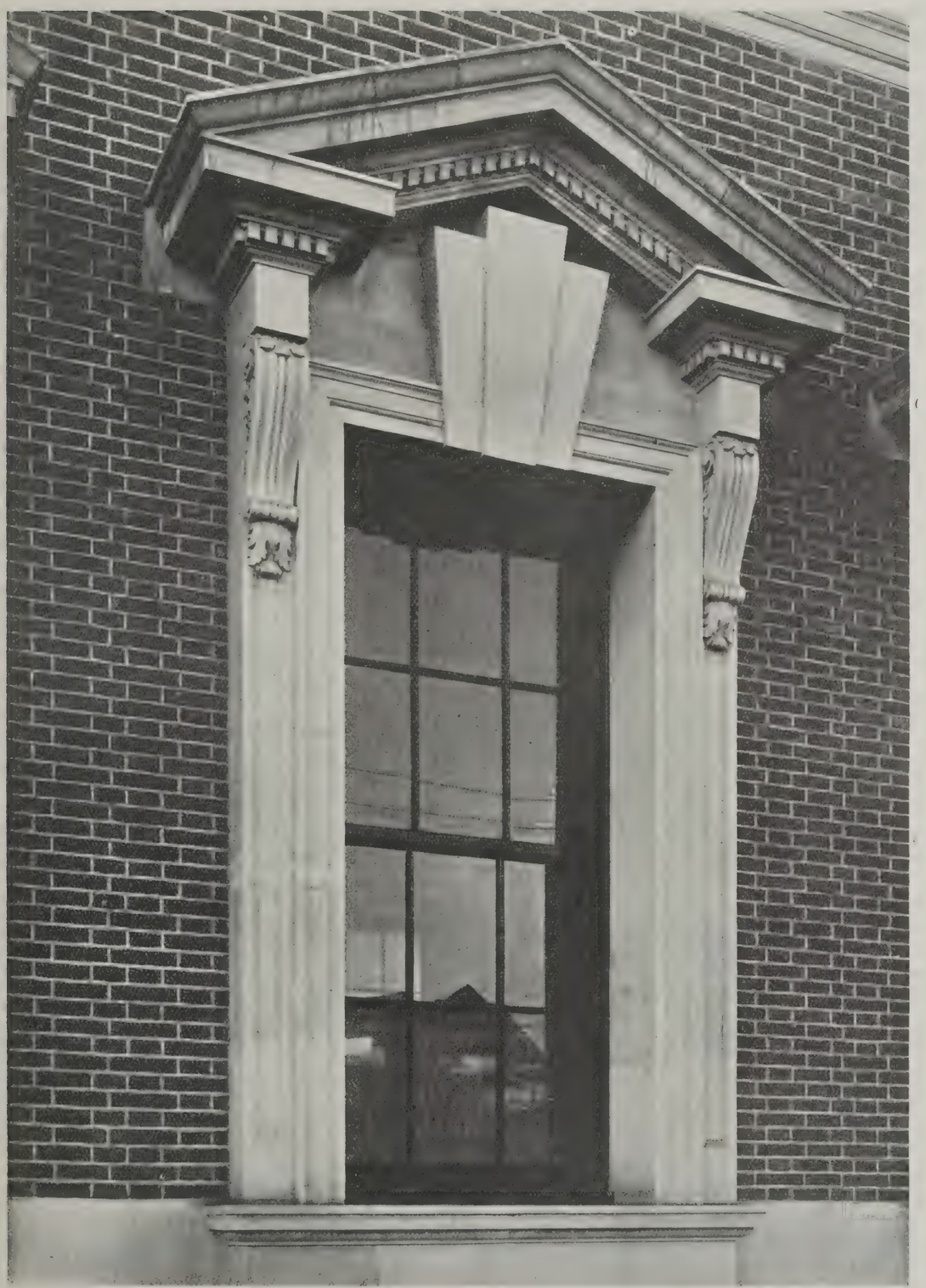
Bank, Golders Green : Circular End facing Golders Green Lane

T. B. Whinney, F.R.I.B.A., Architect

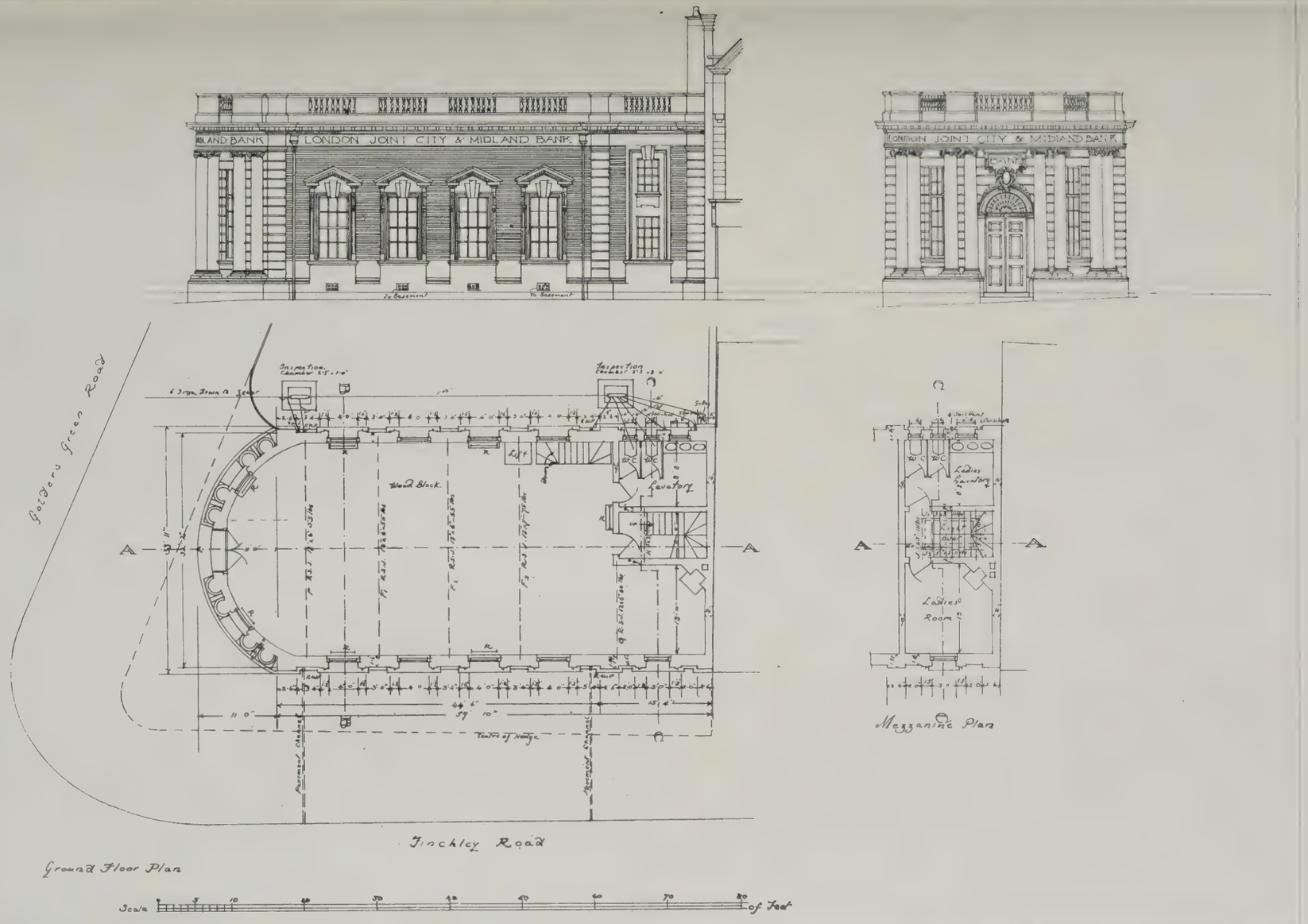
An excellent example of "corner" treatment, the curve of the frontage following the bend of the road. This front is built wholly of Portland stone, and is 33 ft. 11 in. in width. On the left-hand side is a garden belonging to the bank.

Architectural Details. 17.—Window in New Premises for the London Joint City and Midland Bank, Golders Green

T. B. Whinney, F.R.I.B.A., Architect



One of the windows, crowned with pediments of Portland stone, inserted in the red-brick front facing Finchley Road. The mouldings are boldly modelled to give the effect of bank-like strength.



NEW PREMISES FOR THE LONDON JOINT CITY AND MIDLAND BANK AT GOLDERS GREEN: PLANS AND ELEVATIONS
T B. WHINNEY, F.R.I.B.A., ARCHITECT.

(*Concluded from page* 128.)

The general contractors were Messrs. Holland and Hannen and Cubitts; the sub-contractors being as follows: Messrs. Faldo & Co. (asphalt lining work), Messrs. Browns, Brentwood (facing bricks), Middleton Fireclay Co., Leeds (glazed bricks), Messrs. F. J. Barnes, Ltd. (stone generally), W. Aumonier and Son (stone carving), Excellence Reinforced Concrete Co., Leeds (reinforced-concrete construction), Messrs. Redpath, Brown & Co., Ltd., E.C. (steel work, steel construction, girders), Art Pavement and Decoration Co., Ltd., Camden Town (tiles, wall, ceiling, floor, and roofing), Messrs. Faldo & Co. (asphalt flat), Messrs. Thomas Elsley, Ltd. (stoves grates, mantels), Messrs. Twyfords, Ltd. (sanitary ware and fittings), Messrs. Thomas Elsley, Ltd. (lead down pipes and r. w. heads), The Excellence Wood Block Floor Co., Leeds (flooring, wood block, parquet), Messrs. H. C. Tanner & Co., Hanwell, W. (marble), The Hendon Electric Supply Co., Ltd., Hendon (electric wiring) Messrs. G. and A. Brown (plaster work, fibrous and modelled), The General Electric Co., Ltd. (electric light fixtures), Messrs. Marley Bros., Birmingham (door furniture, locks), Messrs. Pridmore & Co., Coventry (gates, railings), Messrs. George Johnson (lifts), Messrs. H. White and Son (heating), Ratner Safe Co., Ltd. (strong-room doors, safes, etc.), Messrs. Nicholson and Son, Ltd. (walnut framings and fittings to Banking Hall), Messrs. Bigwood Bros., Birmingham (steel shelving).

Law Report

Judgment on Surveyor's Report

Davis v. Cresswell.

Jan. 11. Official Referee's Court.
Before Sir Francis Newbolt.

In this case the plaintiffs, Mr. David Davis, of 27 West Cromwell Road, Mr. Arthur Henry Davis, of Homefield, Chesham Bois, Bucks, and Mr. Edward Maximilian Davis, of 60 West End Lane, N.W., claimed from Mr. Henry Peter Cresswell, of Gunshot Farm, Billinghurst, Sussex, damages for breach of the repairing covenant of a lease of four cottages at Waltham Cross, Cheshunt, in the county of Herts. The premises were held under a lease dated 1902 for a term of 85 years from that date.

Upon the case being called counsel for the plaintiffs said that the damages claimed amounted to £200, and the defendant had not put in an appearance. Mr. Hawser, a surveyor, had been appointed, at the instance of the Referee, to make a report as to the dilapidations, and that gentleman had reported after inspecting the premises that in his opinion the cost of the outside repairs would be £125, and the sum of £65 was the amount which he thought the plaintiffs would be entitled to for inside work. The plaintiffs did not question these figures, and as defendant did not appear he (counsel) presumed he had no objection to raise to them. Mr. Hawser had suggested that defendant was not liable for the cost of stripping and repapering for which a claim had been made, and he had not therefore priced that work. That, counsel contended, was a matter of law to be decided by the Referee, and not by the surveyor.

The Referee said that the other side had, it seemed, accepted the report, and therefore did not defend. If, under the circumstances, it was sought to increase the amount by the cost of the stripping and papering it might lead to an appeal and increase the costs, and it was questionable whether it would be worth while to adopt this course and to increase the costs with the possibility of defendant being unable to pay.

After consultation with his clients counsel said he would accept the suggestion of the Official Referee and only ask for £190.

Judgment was accordingly entered for that amount with costs.

Publications Received

"Concrete and Reinforced Concrete." By W. Noble Twelvetrees, M.I.Mech.E., M.Soc.C.E. (France). Price 3s. net. Sir Isaac Pitman and Sons, Ltd., Parker Street, Kingsway, W.C.2.

"Bulletin of the United States Bureau of Labour Statistics." No. 263. October 1921. Housing by Employers in the United States. By Leifur Magnusson. Washington Government Printing Office.

NEW PREMISES FOR THE LONDON JOINT CITY AND MIDLAND BANK, GOLDERS GREEN
INTERIOR OF BANKING HALL.
T. B. WHINNEY, F.R.I.B.A., ARCHITECT.

ir Charles Ruthen at the Society of Architects

E is a bold man who has the courage of his own convictions. Sir Charles Ruthen is as bold bolder—he has the courage of other ole's. Few of us are in a position to what we think, which is very fortu- for us, and no less fortunate for er people; and few presidents of ned institutions are unselfish and ageous enough to exercise fully r power of moulding the outlook he bodies over which they preside.

o find a president in the rôle of a orious judge is a rare pleasure. profession is too rarely criticized within, and too ignorantly criticized without. We shall never become ation of great architects until we me a nation of great critics. Criticism ne of the main stimulants of art, re it is only by elimination that artist approaches perfection.

he architectural profession is peculiar his modern world of ours. Its atmo- re is in the nature of an anachronism. re is no profession which dwells much on the past. The engineer, doctor, and the lawyer are compelled e up to date, but owing to the paucity modern æsthetic motives, we have induced to look back for guidance.

ie President's address has the racter of a pronouncement. Every l of it is worth reading, and whether can follow all its trenchant phrases agreement matters little; it will e one think, and that is the main g.

r Charles Ruthen said: To speak truth is usually to speak the un- sant truth; it is not a nice posi- to occupy when one has to take npopular course. The popular course sier in avoiding all the snags and s. The world is too full of people hand down and whisper what ought e done, too rare in people who will laim what they will themselves do et things aright. The architectural ession as a body does not do well; ves too much on its glorious past. of us in the profession do well; remainder get along somehow. My s are strong: I intended that they ld be strong. I want to make it that we do not study our profession ie true professional spirit. We are led against ourselves. We should consider the State in which we live, consider each other a little more. are not sufficiently related to the nercial competitive age in which live, and we must bring ourselves t line with it. If these remarks cause t so much the better. A good riot l do much more good than harm.

uring the past few years I have been n to the consideration of the position pied by architects and architecture e social system of to-day.

cumstances following rapidly one another, during the years immedi- following the Armistice, have caused to wonder whether the architect of wentieth century is much if anything l of his brother of a century ago her or not in the advance of civiliza- of science, of commerce, in the pro- gress generally of all that contributes to modern life, the architect and his craft have progressed shoulder to shoulder with other things.

Those within the profession have heard much of late regarding proposals for the unification of the ranks of the profession, and the statutory registration of those practising architecture. It is further well known to a small group within the profession, that much of recent years has been heard of what are considered to be the proper modes and methods of providing efficient architectural education.

The general public know nothing of these momentous discussions, carried on energetically and almost continuously by a mere handful of professional enthusiasts, and have little knowledge of the real value of the architect and his craft to modern progress and civilization.

Some, but comparatively few, understand the architect and value his work. Many others look upon the architect as a kind of necessary and expensive evil, mainly useful in connection with building matters, in avoiding difficulties in relation to regulations and by-laws; but generally a costly luxury to be avoided whenever possible.

One wonders whether the public realize the value that the architect and his craft should have been in the prosecution of the great world war, and whether architects themselves consider that their training and experience were utilized in the fullest manner, and to the benefit of the State and the people, in that great emergency.

In pondering over these matters one again wonders whether the architect of this enlightened century has really grasped his full responsibilities, and still again to wonder whether he has yet the slightest appreciation of the great part planned out for him and his art in modern civilization.

The fact is very surely borne in upon one, that the great public have not the faintest idea of the important part played by the members of the architectural profession in the everyday life of the people, and one wonders whether the architect attaches to himself any share of the blame for this fatal ignorance, or whether he sometimes stops to think, and perchance realizes that this lack of understanding is after all due in part, if not in a large measure, to a strange backwardness upon the part of the entire profession.

Better that the architect adopted the practice—often termed pernicious, but very consistently condemned in our country—extensively and even successfully practised on the other side of the Atlantic—of advertising his wares and his services, in the manner popular with any great drapery store or furniture emporium.

Architects must not advertise, they must not offer their services; this would be a gross breach of professional etiquette; they must remain silent, and trust to some piece of good fortune—to the winning of some competition, to the favour of some important or wealthy client—to bring them publicity or perchance fame.

That the advertising of one's wares like some vendor of ordinary or extraordinary soap, or hair restorer, is repugnant and offensive to the sensitive feelings of the architect, brooks no argument; but to lie low and hide the gifts of the Creator under a bushel and to refuse or neglect to let the public learn of the value to modern life of good architecture, is a crime. It is wrong to architecture as an art, wrong to architecture as a science, and wrong to the public whom the architect should serve.

The present stand of architects is perhaps agreeable to the few, shall I say even satisfactory to the few. At the top of the professional ladder there is much room, but the lower the rungs the greater the crowd, and the more congested and cramped the accommodation.

One may object "to advertise" oneself or one's own work, in the sense of paying so much per line in the advertisement columns of a newspaper or periodical; but one may not object "to being advertised," or to being written about or of, in the ordinary news columns of a newspaper or periodical. This is cheaper, and incidentally more efficacious, but it is nevertheless advertising.

To withhold from the great masses of the people information expressive of the value of good architecture, is not sound common sense. The greater the appreciation by the masses of good architecture, the better for the people, the world, and architecture.

Architecture is not an insignificant craft, it is not valuable or useful only to a few; it is necessary and essential to the full life of the nation, and should not be kept in the background. We may have come to the end of a long chapter in the history of architecture, or we may be reaching that point; but there are other important chapters to follow. We cannot, and should not, expect to live on the past reputation of our art. The greatness of its past should not prevent it from having a great present and a great future.

Do the representative bodies of the architectural profession, to-day, stand for the architecture necessary for the social and industrial well-being of the people, or do they stand for that civil architecture which is the art of designing such edifices as display symmetrical disposition and fitting proportion of their parts, and are adorned by pillars, entablatures, arches, and other contrivances for their embellishment?

Is this in the true sense the architecture of the architects of to-day, and, if so, is the architect giving to the State in these essentially commercial days the services which the State has a right to demand? In other words, is the architect adapting his art to the needs and requirements of the present time?

Let us attempt to put behind us all preconceived ideas of what is proper or improper from the points of view of professional etiquette, and let us endeavour to apply to the necessities of the age in which we live a consideration of the value of the real science of building and architecture, so far as the latter term is applicable to the requirements of the people and the State, in regard to healthy and happy existence, and apart altogether from the art of the craft in the artistic or æsthetic sense.

Architecture, it will be generally agreed, is a very wide and comprehensive term, and although there are thousands in this country who do not avail themselves of the services of the architect, it is yet passing strange that all the defects in all the buildings that are erected are ingeniously placed at the door of the architect.

I have set out to address these words to my own Society, and incidentally to others present, in the hope that I may startle the members of the profession into some

definite form of activity. I refrain from making any definite recommendation, I deliberately accept the rôle of a ruthless critic, in the hope that the profession may be awakened from the lethagy into which ages of false pride have reduced its members.

The difficulties which the State had to face immediately after the conclusion, and mainly as a result, of the world-war, gave the architect and the profession an opportunity of a century. A torrential flow of almost entirely new work was released as the direct outcome of the cessation of hostilities. This flow was somewhat unevenly distributed, and in that direction left much room for complaint, but such uneven distribution appeared to be inevitable in view of all the circumstances peculiar to the architectural profession.

The question I have asked myself over and over again is, Did the architect rise to the occasion, or did he creep out from his seclusion and practise his art with a benumbed and slow-moving mentality—taking, so far as his opportunity permitted, full advantage of the difficulties and trouble of the State—first to practise his art without consideration of the consequences, and secondly to earn fees, large ones if possible, without a thought of his master, the State, and without a thought of the effect of his actions upon the future of the profession?

One would ask again, Does the architect occupy the place that is his due in the social structure of to-day, and has he taken his share in the burden of the present time? Is he in experience and knowledge, and by training, competent to undertake the duties he owes to the State? Is he serving his profession in the fullest sense, without giving his proper quota to the matters which are vital to the State?

I want to be understood as discussing all these matters not with the eminent and distinguished, but with the struggling and trained efficient young practitioner the backbone of the profession.

The fact is that the architect consistently ignores the science of his craft (and he is taught studiously so to do), and clings tenaciously to the art. He is supinely unconscious of the place of architecture in the structure of modern life.

When I refer to the science of the craft it must not be considered that one means the science of building or that of construction, but rather the scientific place in the world of the architect and architecture. What part in modern life does the art of architecture take, and what part the real science of building? What consideration does the profession, through its representative bodies, give to the science of the profession, and what consideration to the art? Is the latter now considered the all of architecture, and the former neglected, and its study untended and uncared for?

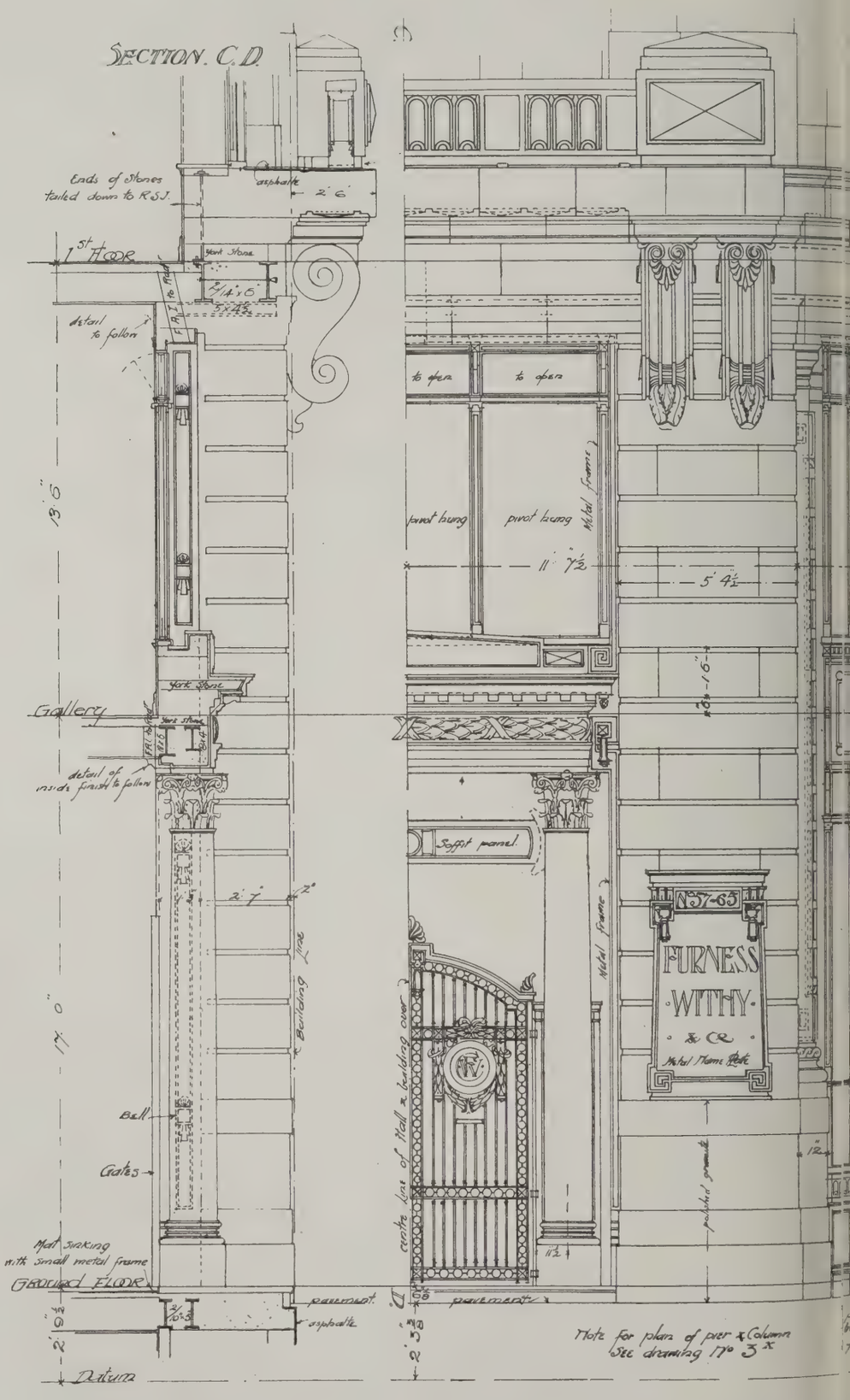
One hears much of educating the architect of the future. Will that education be sound if no place is given to the consideration of the immense value of the art of building to modern everyday life? Is the architect of the present day fully conversant with this phase of the subject? Has the subject of the education of the general public as to the value of architecture in modern life been given proper consideration by the profession; and if not, is this not a matter which should be taken in hand at once?

I would wish the members of the profession very seriously to consider whether sufficient time has not already been spent resting contentedly upon its feather bed of the art, and whether the profession has forgotten, if indeed the lesson was ever learnt, that people live in houses and not upon the. The propagandist and housing reformer preached for many years before the outbreak of the war, a new system of area development and a new system of house planning. The architect—that is to say, the gentleman who works entirely for fees—came into the thing just after the signing of the Armistice.

Did he assist to any appreciable degree those who had preached for years the enormous arrears in housing for the people, or did he forget his responsibilities to the State, if indeed he ever fully appreciated them, and his duty to architecture, and allow his pencil to run wild in the dream of the art to

Architects' Working Drawings. 48.—New Offices for Furn

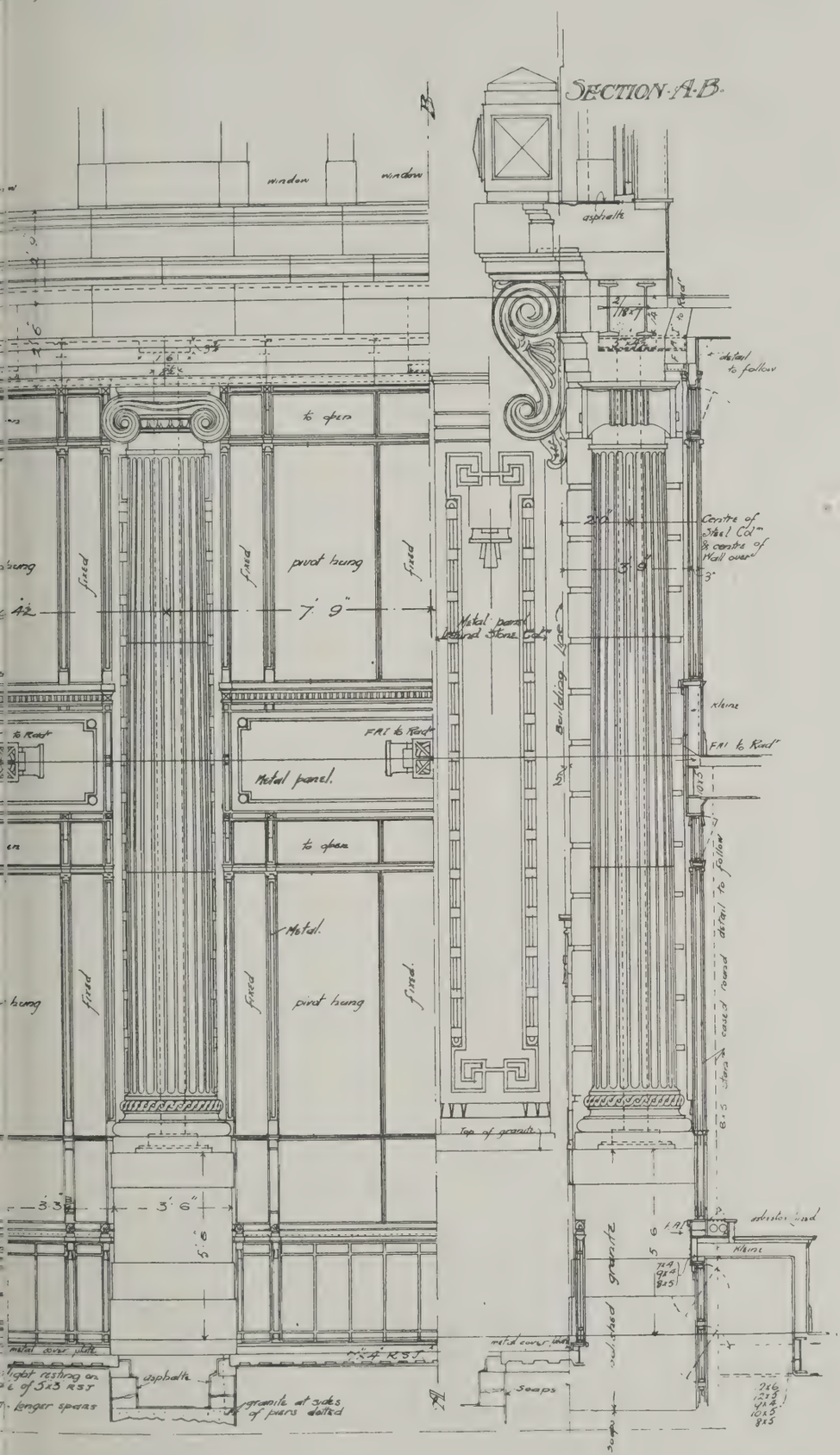
M. E. Collins, F



The great galleried shipping hall, the working drawing of the elevation of the Leadenhall Street entrance to[w] centre of the world of shipping, and mark a distinct era in the development of City office buildings. The[ir] marble and woodbloc[k fl]

thy & Co., Ltd.: Entrance Hall from Leadenhall Street

A., Architect



re shown, is the main feature of the Furness Withy building, which premises virtually form the business nptuously decorated and fitted, with walls of Sicilian marble, decorated plaster ceilings and mouldings, ogany counters, etc.

and did he forget that the bank-
y of the State would be the inevi-
result? All these things require
s and concentrated study. The
ect must face the prime responsi-
of the financial disaster of the
State Housing Scheme.

greater and no finer effort to
le with one of the greatest of social
ems has ever before been made
ny country in the history of the
. No more magnificent conception
have been possible. This colossal
was made when the finances
country were well-nigh at the point
haustion; but those responsible for
launching of this great scheme
ned to produce half a million homes
few years had every reason to be
t of their offspring.

lo not acquit of all blame those
e head of this gigantic undertaking
he difficulties that arose during the
ng of the plan into execution. Some
e initial steps taken without a care-
crutiny of the forces waiting to
y the unwary were faulty.

le architectural profession, in its
ement to grasp a great flood of new
nexpected work, overreached itself.
bout the designing of ideal homes
deal lay-outs, the pencil went wild.
tic houses were to be erected at
steep roof-pitches could now be
ted; picturesque gables, and the
artistic features so dear to the
of the artist, could be incorporated
ut the slightest danger of being
ned down."

le architect, as the fountain-head
his national effort, should have
ised his art with a very keen and
al eye upon the serious financial
of the problem, and it is just at
oint that he missed his opportunity.
danger was not even seen; the
tect, I believe, would largely argue
he was not called upon to view
side; that is where the profession
wrong.

e great public for once were to be
ured with an exposition of the real
of architects in a great housing
. The effort to a point has been
ssful, if the work only is viewed
altogether from the question of
Is that quite satisfactory? What
tect in private practice would be
ssful (speaking again to the rank
file) if he refused or neglected to
der the important question of cost?
e unfortunate feature of this great
nal Housing Scheme is that the
tect's example was followed through-
ll the arms of the industry. Archi-
profiteered in that their art occupied
large a part in this great under-
ng. Other arms followed, and in
various spheres bled white this
endous effort to house the people.
vo hundred millions capital loss will
he price to be paid for this great
t to correct the errors of genera-
.

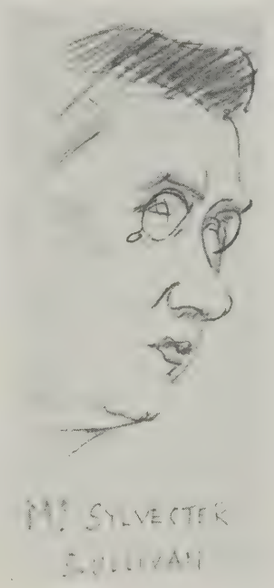
lousing provision for the people
ssarily will have to be continued.
tly how is not at the moment a
er I care to discuss. Houses must be
ided in sufficient numbers, and I
rely trust that the great national
t, so far as it has been carried into
t, will guide and control the methods
ouse building in the future. Whether
itects in the future will be engaged
to the extent that the profession hoped and expected is another matter.

There should be room for proper and efficient architectural intervention, and it is the duty of the architect to the State to formulate proposals whereby the architect comes in as part of economic National Housing.

If the employment of professional assistance renders a building proposal uneconomic, there is fault somewhere, and the profession must investigate and correct the wrong. Economic house building there must be. If possible, with architectural assistance. If not without.

I trust that these few fragmentary remarks will not be taken unkindly. They are delivered with the intention of assisting the profession to occupy a more important and a more recognised and, shall I say, a more popular, position in the estimation of the people.

To move the members of my profession into action, to galvanize into life some of the pious wishes of the many, and to succeed in winning some better universal recognition for architects and architecture, will be sufficient payment for my slight, if somewhat caustic, talk



to the members of The Society of Architects this evening.

The discussion which followed was interesting. Mr. Sylvester Sullivan said: The President has been trailing his coat-tails along for others to tread on them, and it is up to us to tread on them. As to the National Housing Scheme, the position was partly our fault. We should have been more generous at that time of stress. From my experience with architectural societies, there is little doubt in my mind that they are largely mutual admiration societies, and at their meetings the preservation of good order, solemnity, and circumstance is the key-note of the occasion. Architects should make themselves more useful. They should be employed for economic advantage as well as for their artistic functions The builder will not come to the architect in the light of a sound business proposition. Why not modify the scale of fees to meet the builder? The builder will go on building regardless of the architect, so why not beautify a building at small expense, and by simplifying it so reduce its ultimate cost. The fact that a design for an ordinary dwelling-house is simply repeated should be remembered.

Sir Henry Tanner congratulated the speaker on his address. He said that the business of the architect is to attend to the business of his clients. The architect should be in a position to show his client that the work was on a paying basis. He did not quite follow the speaker's remarks regarding the architect in relation to the State. He took it that architects should use their concerted influence with those in control for the welfare of the profession.

As regards the Housing Scheme, the President had put the blame on the wrong horse. The Department for Building Materials Supply had put up the price of materials.

Mr. Bennet said: Sir Charles Ruthen's paper gives us a new outlook on things. We are to thank him for so searching an enquiry into the circumstance of our profession. As to the employment of architects by the Government, the Governemnt took architects at their own valuation. As art men, and draughtsmen, as business men and men of the world—never. This was not so with the engineer. The architect is as well trained and as sane and sound as the member of any profession in the country, but he is not as well organized, he is not so sure of himself. In what way should we help the State? You tell me that I am personally responsible for housing failure. Why didn't we get together ourselves and thrash out this matter for ourselves, and not leave it in the hands of other people?

Mr. Sadgrove said: I must take up one or two points antagonistic to the President's remarks. I cannot consider that he seriously means what he says. He places the blame of the housing failure, with the possible bankruptcy of the State, on the architect. How on earth could the architect be aware of the financial condition of the State? Those at the heads of the Government departments should have known. Architects were called in to do their best; they did their best. They were not responsible for the high costs of building. The President said that "Architects overreached themselves." Surely he does not mean this seriously? Architects did not plunder the State. He says nothing of the obstacles placed in the way of architects working on the housing schemes. The State knew that the profession was not unified. The remedy is in the unity of the profession, but that is a matter which I need not talk about now. The ordinary working architect, when building up a practice, has little time for outside matters. When he gets to the top of the tree he can afford to give more time to the interests of the profession, and if he is the well-meaning fellow we take him for, he will do this. Sir Charles has indeed used a rough-edged sword.

Mr. H. M. Roberts said that in America, where he had been for some time, the architectural office was composed of several people, each an expert in one direction. There was the engineer, the designer, and the constructive and the business experts, each man doing just his own work in conjunction with his colleagues. It was ridiculous to expect

a man to combine within himself these opposing attributes. As to advertising: In America they advertised to some small extent, but firms of good standing did not advertise in the usual sense of the word. He did not see why an architect's name should not appear on a small board on a building in course of erection.

Mr. Ernest Marzeland said that we must drill it into the minds of business men that architects save money. The builder should also be made to see this. Would it not be possible for architects to build as well as design? This is being done in America, in Germany, in Italy, so why not here?

Mr. W. H. Leaverton said that, speaking of fees, he considered that the percentage system was not one that appeals to the modern client. Although the architect always makes it his business to keep down the cost of building, the client can hardly be blamed for being a little sceptical about this, when the architect's fees increase with the cost of the building.

Sir Charles Ruthen, in reply, said: I certainly do not agree that an architect should carry out building operations himself. The architect has so many different things to do as it is without taking up building.

Mr. Sadgrove said that the architect did not know the financial position of the State in the matter of housing. I can only say that he ought to have known. Sir Henry Tanner blames the D.B.M.S. for the housing failure. The D.B.M.S. does not account for it. It must be remembered that, although the D.B.M.S. kept up the price of materials, it also kept them down. Please think what would have happened but for the D.B.M.S. It did not control all the materials, and those that it did not control went soaring up higher. It was only the fear of foreign competition which kept them down at all.

The Government took the right step in curtailing building operations, and we should have been the people to have told the Government to take that step. If the scheme had gone on we would now be seeing the £2,000 house. The whole cause of the failure of the Governm Housing Scheme can be put in a sin sentence. It is this: The amount work given out exceeded the capacity the industry; the men to carry out work were not walking the earth. T building employé under a glut of wo worked as he pleased. A man does work hard when he knows that there plenty to do. He works hard when work has to be worked for. As to costs of buildings and building materi the costs have come down in a mam which we would have never imagined n months ago. As Director-General Housing I took over a thousand milli bricks which cost approximately 95s. 105s. per thousand; that same class of br is now 45s. per thousand lower in price

I predicted some little time ago th we would return to the £500 house. W have just reached that point. Hou are now £25 less than half the price th were ten months ago to the same desi same specification, same site.

F. E. T

Comparative Prices—1914-1921

Very serious injury has been inflicted on the building industry through the widespread dissemination of vague allegations of "vas increased costs" for building. As "only the unknown is terrible," a useful purpose—that of allaying false fears—will be served tabulating some plain figures. The appended lists, showing the comparative prices for labour and materials during the years specif has been, we are assured, very carefully compiled. They show that the material market is subject to fluctuations, in which prices of certain items are as apt to travel upwards as downwards, and that continuous reduction cannot reasonably be anticipat It would, therefore, be unwise to postpone building operations in anticipation of a fall that is not more likely than a rise. Some the prices, indeed, seem to have reached the lowest level to which they are likely to fall.

Labour

	1914.	April 1919.	December 1919.	June 1920.	September 1921.	Decembe 1921.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
Excavator .. .. per hour	0 0 9	0 1 6	0 1 9	0 2 2	0 1 8½	0 1 8
Bricklayer .. .. ,, ,,	0 0 10½	0 1 9	0 1 11½	0 2 4	0 2 0½	0 2 0
Mason (Fixer) .. .. .. ,, ,,	0 0 11½	0 1 10	0 2 0½	0 2 5	0 2 1½	0 2 1
Carpenter and Joiner .. .. ,, ,,	0 0 11½	0 1 9	0 1 11½	0 2 4	0 2 0½	0 2 0
Smith .. .. ,, ,,	0 0 9½	0 1 8½	0 1 10	0 2 1	0 1 11½	0 1 10
Fitter (lathe, etc.) .. .. .. ,, ,,	0 0 10½	0 1 9¾	0 1 11¼	0 2 4	0 2 0½	0 2 0
Hot-water Fitter .. .. .. ,, ,,	0 0 9½	0 1 8½	0 1 10	0 1 11	0 2 0½	0 2 0
Plasterer .. .. ,, ,,	0 0 11½	0 1 9	0 1 11½	0 2 4	0 2 0½	0 2 0
Plumber .. .. ,, ,,	0 1 0	0 1 9½	0 2 0	0 2 4½	0 2 1	0 2 1
Painter .. .. ,, ,,	0 0 9	0 1 8	0 1 10½	0 2 3	0 1 11½	0 1 11
Labourer .. .. ,, ,,	0 0 8	0 1 5	0 1 8	0 2 1	0 1 7½	0 1 7
Horse, cart, and man .. .. ,, day	0 10 6	1 2 6	1 10 0	1 12 6	1 8 6	1 8 6

Materials

Thames ballast .. .. .. per yard	0 5 6	0 15 0	0 17 0	1 0 0	0 15 0	0 13 6
Stock bricks .. .. ,, 1,000	1 15 6	4 15 0	5 10 0	6 5 0	6 5 0	6 0 0
Fletton bricks .. .. .. ,, ,,	1 12 6	4 2 6	3 18 0	4 5 0	4 10 0	4 1 0
Portland cement .. .. .. ,, ton	1 16 0	3 8 0	3 10 6	4 4 6	4 3 6	3 17 6
Portland cement sacks .. .. each	0 1 1	0 2 6	0 2 6	0 2 6	0 2 3	0 2 0
,, ,, ,, credited .. .. ,,	0 1 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0
Keene's cement .. .. .. per ton	2 9 0	4 5 0	5 0 0	5 15 0	6 0 0	8 15 0
Sand .. .. ,, yard	0 6 6	0 15 0	0 18 6	1 5 0	0 18 0	0 16 0
Coarse plaster .. .. .. ,, ,,	1 5 0	2 7 6	3 5 0	3 15 0	3 15 0	3 10 0
Fir .. .. per ft. cube	0 2 0	0 7 0	0 5 9	0 6 6	0 4 6	0 4 6
Joiner's deal .. .. per ft. super as 1 in.	0 0 3	0 0 7	0 0 7	0 0 7½	0 0 7½	0 0 6
Teak .. .. .. ,, ,, 1 in.	0 0 9	0 2 3	0 2 3	0 2 3	0 2 3	0 2 3
Wainscot oak .. .. ,, ,, 1 in.	0 0 9	0 2 6	0 2 6	0 3 7	0 2 9	0 2 6
Rolled steel joists .. .. .. per ton	8 0 0	18 5 0	23 10 0	35 0 0	15 10 0	14 0 0
4 in. C.I. R.W.P. .. .. .. ,, yard	0 2 11	0 4 6	0 5 11	0 7 6	0 7 1	0 6 6
Sheet lead .. .. ,, cwt.	1 1 6	2 1 0	2 12 0	2 14 0	1 15 6	1 16 0
White lead .. .. ,, ,,	1 6 3	3 6 6	3 3 6	4 6 3	2 19 9	2 16 0
Plumber's solder .. .. .. ,, lb.	0 0 9¼	0 1 5	0 1 3	0 1 9	0 0 11	0 0 11
Mixed paint .. .. ,, ,,	0 0 4	0 0 9	0 0 9	0 1 3	0 0 9	0 0 9
Linseed oil .. .. per gallon	0 2 8	0 6 0	0 7 0	0 7 9	0 3 6	0 2 6
21 oz. sheet glass .. .. .. ,, ft. sup.	0 0 3½	0 0 10½	0 1 0	0 1 3	0 0 7½	0 0 7
Cartage to shoot .. .. .. ,, load	0 3 6	0 10 0	0 10 6	0 10 6	0 9 0	0 8 0

ttle Things That Matter. II—Above Ground

By EDWIN GUNN, A.R.I.B.A.

tching Bond.—With the increased f 11 in. cavity wall construction her bond is becoming increasingly ar, and certain defects of appear- are usually present. That most nt results from the necessity of ng bond, which produces a clumsy nning perpendicularly up the wall. ad effect of this can be removed if eak in bond is varied in position quently as possible. A ready way this is to introduce a course of d headers every fourth or sixth in height, which affords an oppor- for the change. According to the softness of the facing bricks used there will always be a proportion of bats, which it is possible to use in this way. The dull appearance of stretcher bond is much improved by this expedient.

Frames.—The setting of frames presents several opportunities for the commission of trifling errors, which yet hurt the effect of the whole. A generally flush effect is most consonant with cottage building, and this is naturally obtained when the frames (usually 4 in.) are set with their backs in line with the inner face of outer 4½ in. of cavity walling. This leaves a visible break of about ½ in.—sufficient to give a line—and permits the hardwood cill 6 in. wide to project 1½ in. so as to throw off water without the need for further provision. The head of the frame should be sawn off at an angle so that no horns show, as in Fig. 6, and a brick-on-edge course (with two or more courses of tiles to level up to courses if wanted) is sufficient above, the inner wall being carried by a lintel. A brick-on-edge "lintel" does not look sufficient where the frame beneath is recessed more than at most 1 in.

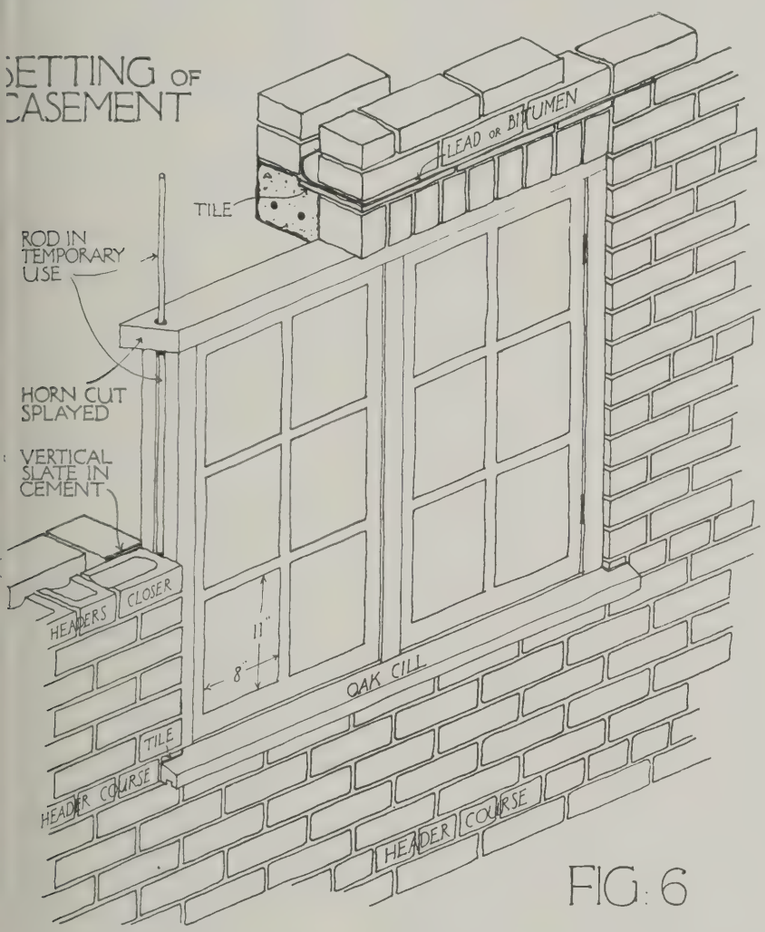


FIG. 6

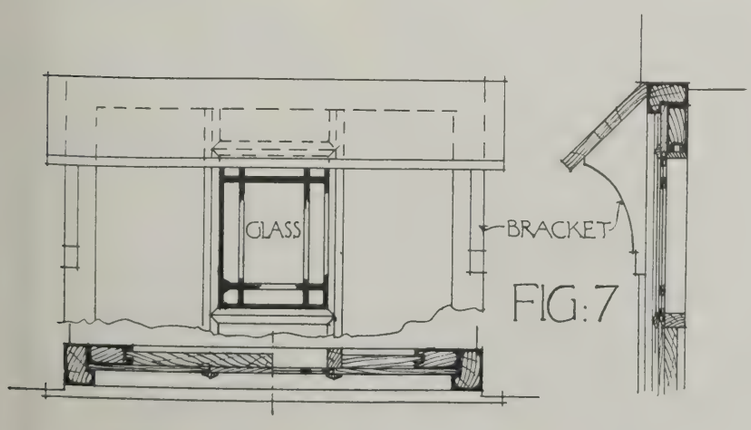


FIG. 7

Where wall space above permits, a half-ring semi-circular arch is a pleasant addition, the spandril filling of brick being set flush with frame beneath, so that the line of reveal is carried round by a ½ in. recess. A damp course of lead or bituminous sheeting must, of course, be set on the head of the wood frame in such a manner as to intercept moisture which may enter the cavity. Where concrete lintels are used, a good method of procedure is to have window frames prepared with a wide groove (say, ½ in. deep, 1 in. wide) and 1 in. centre-bit hole in head above same. When frames are in position the two ½ in. or ⅜ in. rods to be used in reinforcing the lintel are placed in these grooves, projecting through head at top. On building up to head-level the rods are withdrawn and cement grout poured in and puddled with the rods to remove air bubbles or voids, the rods being then used in in situ lintels.

It is, perhaps, a truism now to insist on the advantages of all windows being based on a standard proportion of pane. Errors in scale still occur, however. Probably the most satisfactory simple rule is to base cottage casements on the two-light casement and frame of a width over-all of 3 ft. 9 in.—each casement, two panes wide, having its panes proportioned in width and height as the square to its diagonal. This gives a pane size of about 8 in. by 11 in. Windows in other multiples are worked out on this basis.

Doors.—In no case is the cottage effect so frequently missed in new work as in external door and canopy. Neither panelled doors with upper part glazed nor ledged, framed, and braced, filled with V-jointed boarding in narrow widths, look really appropriate, and the suburban-looking little door canopies so often seen are not particularly pleasing. The two essentials to a broad effect are apparent solidity of frame and fewness of parts. An unmoulded frame showing not less than 3 in. on face, and any sort of door if covered externally with wide boards, filleted above joints are invariably satisfactory in effect. A small open panel for light can be easily formed in such a door, with narrow linings. As a hood or canopy nothing gives a better effect than an inclined board from the door head, with brackets or cheeks fixed to the frame just inside the reveals, all as shown in Fig. 7.

Jointing.—The influence which the colour of jointing has on the effect of brick facings is a matter which it is hard to get workmen to recognize. "Colour" depends not solely on the material of the joints, but their proportionate width and

recessing. It is hard to dogmatize, since facing bricks vary extensively, and demand varied treatment, but certain expedients infallibly have a deadening effect on the most interesting of bricks. One is a weathered joint of cement mortar of the ordinary dull bluish-grey tinge; another is a white joint of narrow or medium width. This matter is really of extreme importance to the appearance of buildings, and worthy of much more consideration and experiment than it usually gets. A red brick of full size and naturally even colour probably looks best with thinnish flush mortar joints of soft brownish tone; strongly coloured bricks (such as the Black-country bricks) look well with fat white rough joints; grey bricks, such as Lutons or some Buckinghamshire varieties, look quite pleasing with joints raked or pressed well in. While on the subject of jointing it may be mentioned that even that execrable material—black mortar, composed of cement and smiths' ashes has its use; a brick-on-edge wall so built makes an excellent backing for tile-hanging, which may be nailed into the breeze joints. These will hold the nails without breaking up, and the 4½ in. rise of the courses gives a suitable gauge for vertical tiling.

Unemployment Relief Schemes

The Unemployment Grants Committee have issued a circular with regard to schemes of work submitted under the Government proposals issued in September last for granting financial assistance to local authorities inaugurating works of public utility for the relief of unemployment. In this connection it is pointed out that it was contemplated as a condition of the Government contribution that work should be actively commenced on all approved schemes before January 1, 1922, and it was so stated in the circulars issued by the Ministry of Health and the Scottish Office, and also on the forms of application for grant.

In cases which have not hitherto received approval (formal or provisional) it will obviously not be possible to comply with this condition, and if it were strictly adhered to they could not be sanctioned by the Committee. It is nevertheless proposed that the Committee should continue to sanction as special cases (within the financial limits at their disposal) a proportion of the outstanding schemes.

In selecting these special cases regard will be had to :—

1. The volume of unemployment in the district.
2. The date on which application was made.
3. The portion of the total cost of work to be spent on direct wages to unemployed men.
4. The degree of public utility of the work proposed.
5. The amount of grants, if any, already sanctioned in the locality.

The schemes still outstanding are being examined from the above points of view and the Committee's decision in each case will be notified to the authority concerned as soon as possible. Such schemes as may be sanctioned will receive approval on the understanding that the work is started not later than February 1, 1922.

Higher Buildings for London

(*Communicated.*)

The Profession is, generally speaking, divided into three camps in what may be called "The Higher Buildings for London" controversy. First those who prefer the status quo—that is, the existing height lines allowed by the London Building Act conditioned by the clauses which allow the London County Council to approve of special buildings which do not come within these clauses. Secondly there are those architects who demand a radical change in the existing by-laws and a hard-and-fast building height fixed in excess of the present height. The height, they say, should be 120 ft. for all buildings in the City, and 150 ft. for buildings on special sites, with special provisions for those buildings outside the area of the City, but within the compass of Greater London. Thirdly, there are those who, whilst objecting to a hard and fast rule such as is proposed by the second group, would prefer something a little more definite than the existing conditions with which the first group are satisfied.

Now to examine the three propositions in detail. Of No. 1 (that is, the first group) it may be said that it appears scarcely fair on the would-be building owner, who might reasonably anticipate some special sanction by the L.C.C., to expect him to embark on a perhaps highly speculative scheme with no better safeguard than the arbitrary decision of the London County Council. Supposing that he had such a site that he could reasonably build a far higher building than is allowed under the present by-laws without any injury to himself or his neighbours, he would be in a much stronger position and much more inclined to proceed with the initial work of preparing plans, etc., if he knew exactly what he would and what he would not be permitted to do. The whole of the building world, including architects and contractors, are at the present moment anxiously awaiting a revival in building, and anything that can give confidence to those who are considering the possibilities of building should have the most earnest consideration. Confidence is much the most important of all the factors that decide for or against any building scheme. In a city such as London there are so many regulations and obligations which have to be observed—lines of building frontage, ancient lights, rights of way, etc.—that when in addition to these he is faced with such an unknown factor as the goodwill or otherwise of the L.C.C., it is small wonder if he hesitates; and alas! he who hesitates often decides not to build.

This security would be assured him by the proposals as set forth by group No. 2; but these proposals, though giving the prospective building-owner security as to his site value, might do so at the expense of the community.

Mr. Donn Barber, in a recent address at the Royal Institute of British Architects, warned us of some of the dangers and difficulties which were the accompaniment of tall buildings in New York. He told us of sunless streets, of rooms in the lower floors of buildings where artificial light had to be continuously used, and of the consequent depression on the health and vitality of the commun
Apart from the question as to the finan
possibilities of the skyscraper in su
city as London with its particular subs
the time has long passed when the c
munity as a whole is going to sub
calmly to any building conditions wh
though they may advantage the few,
inflict pains and penalties on the man

We have it on excellent authority
some of the most successful of the
office buildings in New York do not
3 per cent. on their capital cost, and
with the advantage of a rock foundat
What similar buildings would cost
London it would be difficult to say, bu
a corresponding scale of values it w
appear that any building-owner who
embark (supposing he were allowed t
so) on the adventure of a skyscrape
London would be lucky if he could d
without incurring an actual loss.

Indeed, it is more than probable t
even supposing the by-laws were amer
to make the American form of buil
possible, they would, as is in fact
quently the case in America, only
undertaken by those who would re
the form of advertisement such a buil
would give them as a sufficient en
itself, and would be content to forgo
secondary question of profit.

It has also been proposed that
height of buildings should be governe
the width of the street or open spac
to which they front, and it has been
gested that a height of one and a
times the width of such street or
space would be a fair and reason
limit. But here again it must be rem
bered that in a city as old as Lon
many of the shorter streets and c
are in some cases as narrow as 16 ft
even narrower, so that an existing o
who under the present Act has powe
rebuild his premises to their exis
height would be severely penalized.

The third group of disputants
prises those who, whilst objecting to
hard-and-fast proposals such as w
be welcomed by group No. 2, would
be in sympathy with a more regula
code than the present Act provides
Generally speaking their proposals
that with the exception of any spec
wide streets the existing by-laws sh
stand, but that for special sites, suc
those facing the river or any perma
open spaces such as the parks, etc., w
could be clearly defined, there shoul
provisions (with adequate safeguar
to light and air, etc.) for the erectio
buildings of a greater height than
allowed under existing conditions.

America has shown us how to give a
tectural character to those many-st
buildings which for want of a b
word we know as skyscrapers.
give scale and an architectural
to her great cities. France has ta
us, particularly in Paris, how to
larize our street architecture, an
we could learn the lessons that both
York and Paris have to teach us
might, by a wise revision of our
building by-laws in this our City of
don, provide not only for the gr
security of the building-owner, so be
ing him and the building world gene
but at the same time provide the c
tions which would make it possibl
us to produce buildings which in
ness of conception and scale woul
worthy of the greatest city in the w

.I.B.A. Examinations

INAL : ALTERNATIVE PROBLEMS IN DESIGN.

Instructions to Candidates.

The drawings, which should prefer-
be on uniform sheets of paper of not
nan Imperial size, must be sent to
ecretary of the Board of Architec-
Education, Royal Institute of
n Architects, 9 Conduit Street, W.,
before the dates specified below.
Each set of drawings must be signed
e author, AND HIS FULL NAME AND
ess, and the name of the school, if
n which the drawings have been
ed, must be attached thereto.
All designs, whether done in school
, must be accompanied by a declara-
rom the student that the design is
n work, and that the drawings have
wholly executed by him. In the
ration of the design the student
rofit by advice.
Drawings for subjects (*a*) are to have
adows projected at an angle of 45
s in line, monochrome, or colour.
ngs in subjects (*b*) are to be finished
rking drawings. Lettering on all
ngs must be of a clear, scholarly, and
cted character.

Subject LXI.

A MOTOR GARAGE.—The building
e erected on a level corner site in a
town. Dimensions of site : 200 ft.
o ft. The garage to be on three
—basement, ground, and first. The
access from the street for the auto-
s to the basement and first floors
by means of sloping ways, of a maxi-
ncline of 1 in 10.
ground floor to be level with the
The object of this programme is
vide a maximum floor area with as
onstructional supports as possible.
ddition to the actual space required
e storing of motor-cars, a covered
on the ground floor to be provided
aning four large cars simultaneously.
repair shop for four cars.
lift for damaged cars.
wo offices with lavatories, etc.
showroom for accessories.
wings.—Plans of two floors : at $\frac{1}{8}$-in.
ration and section showing con-
on at $\frac{1}{8}$ in. scale.
ail with section through one of the
e walls showing construction at
cale.
A BUILDING FOR AN ARCHITEC-
SOCIETY.—Will be situated in a
street, and have a frontage of 80 ft.
modation required :—
nd floor : Entrance hall, secretary
dministrative offices, council-room,
ittee-room.
t floor : Meeting-room (for lectures
xhibitions), with anteroom, Presi-
room, and writing-room.
nd floor : Small reference library,
store-room, librarian's room, com-
-room.
atory and cloakroom accommoda-
be provided in basement and on
floor.
hen, etc., and caretaker's quarters
separate stairs—to be provided
in basement or attic. Heating
tus to be in basement.

Drawings.—$\frac{1}{16}$ in. scale plans, sections, and elevation. $\frac{1}{2}$-in. detail of entrance, showing interior and exterior details.

Subject LXII.

(*a*) A new opening in a deer park wall (stone 8 ft. high) is to be made for CARRIAGE GATES—provide LODGES for the ranger of the park, and for the married gatekeeper.

Drawings.—$\frac{1}{8}$-in. scale plans, elevation, and section, and $\frac{1}{2}$-in. scale detail of gate and piers and one lodge.

(*b*) A level island site in a country town, on which is to be built a ROW OF SMALL HOUSES for gentlepeople of small means. The block to consist of six or seven houses, each house having an average frontage of 24 ft. The accommodation of the houses may vary from two to three sitting-rooms, from four to six bedrooms, and one or two bathrooms. The kitchen offices may not be placed in a basement.

Drawings. — Complete ground plan; bedroom floor plans (these need not be duplicated); three elevations, one section, all to $\frac{1}{8}$-in. scale; block plan showing lay-out of gardens—the front garden is to be common to all the houses, without any fencing or gates, to $\frac{1}{16}$ in. scale; $\frac{1}{2}$-in. scale section and part of an elevation.

Subject LXIII.

(*a*) A CRICKET PAVILION for a county ground, with accommodation for, say, 300 spectators, lavatories, etc.; lavatory and changing-room for amateurs and professionals, scoring box, luncheon-room, small kitchen and staff-room, committee-room, etc.

Drawings.—$\frac{1}{8}$-in. scale plans, two elevations and sections, $\frac{1}{2}$-in. details.

(*b*) A SPORTS CLUB.—This club, which would be situated in a large garden, would be designed to accommodate wealthy members interested in sport.

It would be situated on two floors, and the accommodation required would be as follows :—

Ground floor and semi-basement : Entrance hall, porter's lodge, vestibule, staircases, cloakrooms and lavatories, swimming-bath for displays and competitions, with dressing-rooms, linen-room, and attendants' room (the swimming-bath to be 100 ft. by 35 ft. and 8 ft. 6 in. in the deep end), a large gymnasium, three squash racquet courts, six small private dressing-rooms (each containing bath and wash-basin), staff and goods entrances, service staircases, etc.

First floor : Large hall (for boxing displays and theatrical performances), green-room and dressing-room, small restaurant with kitchen and services, separate cloak-rooms and lavatories for ladies and gentlemen, billiard-room; caretaker and attendants to be lodged in an attic story.

The area in the park reserved for this building not to exceed 200 ft. by 120 ft.

Drawings.—Plan of ground floor, plan of first floor, principal elevation, section —$\frac{1}{16}$-in. per foot.

Dates for submission of Designs in 1922.

	Subj. LXI.	Subj. LXII.	Subj. LXIII.
United Kingdom	28 Feb.	29 April	30 June
Johannesburg	29 April	30 June	31 Aug.
Melbourne	31 May	31 July	30 Sept.
Sydney	31 May	31 July	30 Sept.
Toronto	31 Mar.	31 May	31 July

R.I.B.A. Business Meeting

The fifth general meeting (business) of the session 1921–1922 was held on Monday, January 9, at 8 p.m., with Mr. Paul Waterhouse, P.R.I.B.A., in the Chair.

The hon. secretary announced the decease of Mr. James Henry La Trobe, elected Associate 1886, and Fellow 1893, of the firm of Messrs. La Trobe and Weston, of Bristol, and it was resolved that the regrets of the Royal Institute for his loss be entered on the minutes, and that a message of sumpathy and condolence be conveyed to his relatives.

Messrs. P J. Hiorns and F. L. Johnson, attending for the first time since their election, were formally admitted by the President.

The following candidates for membership were elected by show of hands : As Fellows.—Bennett, Thomas Penberthy (A. 1912), London; Foster, Reginald Charles (A. 1909), Buckhurst Hill, Essex. As Associates.—Basto, Antonio Hermenegildo de Senna Fernandes, London; Forshaw, John Henry, M.C., Ormskirk, Lancs.; Pledge, Charles Terry, London; Pope, Clement Lawrence, Wimborne, Dorset; Sheppard, Everard, Beckenham.

The Royal Sanitary Institute

The course of lectures and demonstrations (Spring Term) of the Royal Sanitary Institute for sanitary officers commences on February 1. The various subjects to be dealt with will be given by well-known authorities, and will be illustrated with diagrams, drawings, models, and lantern slides. In addition to the lectures and visits, students will have the privilege of attending demonstrations on sanitary apparatus and appliances given in the Parkes Museum.

In preparing for the duties of a sanitary inspector a large amount of knowledge can be advantageously obtained in class lectures and demonstrations, but part of the work of preparation must necessarily depend upon individual study and observation on the part of the candidate, and they are recommended to pay careful attention to the following points :—

By observation and enquiry to obtain a practical familiarity with sanitary work, a knowledge of building materials and appliances, the procedure and duties of a sanitary inspector, and the enquiries to be made in the case of infectious diseases and reported nuisances, to see an underground dwelling or bakehouse, to ascertain the routine of the work and the books used in a Public Health Office, and to attend a case in court.

A knowledge of building materials must be obtained by actually handling and examining the materials themselves. This can be done at building works in progress, in addition to examining the specimens in the Parkes Museum. Students should make an individual visit to any ordinary bakehouse, slaughterhouse, police-court, etc., and make opportunities of seeing practical sanitary work in the district in which they live.

The course comprises the subjects scheduled for the examinations of the Institute and the Sanitary Inspectors' Examination Board (formed by The Royal Sanitary Institute and other bodies). Inspections and demonstrations are arranged, and include visits to public and

private works illustrative of sanitary practice and administration, with demonstration on the routine of an inspector's office work and duties.

Further particulars may be obtained from the Director and Secretary, Mr. E. White Wallis, F.S.S., 90 Buckingham Palace Road, London, S.W.1.

Heat Insulators in Cold Stores

A great deal of interesting information with regard to heat insulators appears in a report just issued by the Engineering Committee of the Food Investigation Board. It appeared at an early stage of the proceedings of the Committee that the knowledge of the laws regulating the transmission of heat through materials used as heat insulators in cold stores, and of the physical properties of those materials, was very defective. Accordingly, a Sub-Committee on Insulation was constituted, under the chairmanship of Sir Richard Glazebrook, then Director of the National Physical Laboratory, and with the following terms of reference: "To consider and report upon the problems needing investigation in connection with insulation and with the determination of moisture and temperature in closed spaces, the Sub-Committee to appoint its own convener, and to have powers to co-opt further members who need not of necessity be members of the Engineering Committee."

The work described in the report has been carried out at the National Physical Laboratory under the general supervision of this Sub-Committee and of the chairman of the Engineering Committee, Sir Alfred Ewing, who has been in close touch with it during its progress. The methods of experimenting and the details of the apparatus are, in the main, due to Dr. Ezer Griffiths, Senior Assistant in the Heat Division in the Laboratory, who has been in charge of the work throughout.

The Sub-Committee decided, in the first instance, to turn their attention to the thermal conductivity of the insulating materials usually employed, and, in view of the apparent considerable change of conductivity with temperature, it was agreed to make observations over the range of temperatures ordinarily met with in cold storage work. Further, having regard to the nature of the materials, it was felt to be important that the apparatus should be on a considerable scale. These two requirements necessitated the erection, at the laboratory, of a refrigerating plant.

Much time has been devoted to the development of apparatus by the aid of which the thermal conductivity can be measured in absolute measure. By means of it, it is possible to determine the thermal conductivity of materials used as heat insulators, under conditions closely approximating to those met with in practice.

The present report deals with the thermal conductivity of the materials. In the course of the experiments it was found that, for most substances, in order to maintain a vertical wall, lagged with the substance, at a uniform temperature from top to bottom, it was necessary to supply more heat, per unit area, to the bottom than to the top of the wall. This has been traced to the loss of heat due to the convection currents set up in the air circulating through the pores of the material of which the insulator is composed, and much of the apparent change of conductivity with temperature has been traced to these currents.

The complete investigation of the passage of heat through the walls of a cold store involves two factors: (1) the thermal conductivity of the material, and (2) the transmission of the heat from the external walls into the insulating material. A report dealing with the second problem is in course of preparation.

From the study of the data it was found that cork, slagwool, charcoal, and wood fibres, when of good quality and dry, have practically the same thermal conductivity, viz., 0.00011 gm. cal. per sec. per cm. per 1 deg. C. [= 0.32 B.T.U.'s per sq. ft. per hour for 1 in. and for 1 deg. Fah. diff.]; judging from the fact that such entirely different materials are about equally good as insulators, it would appear that their resistance to conduction is not very far from the limiting value that is practically obtainable by subdividing the air space. In this connection it is of interest to note that still air has a thermal conductivity of only 0.00005 C.G.S. units [= 0.14 B.T.U.'s per sq. ft. per hour for 1 in. and for 1 deg. Fah diff.] or barely half that of the best of these materials.

Different brands of cork, etc., vary slightly in their efficiency as insulators, but it may be stated as a general conclusion that with samples of good quality such differences are not very considerable.

The report is published by His Majesty's Stationery Office. Price 3s. net.

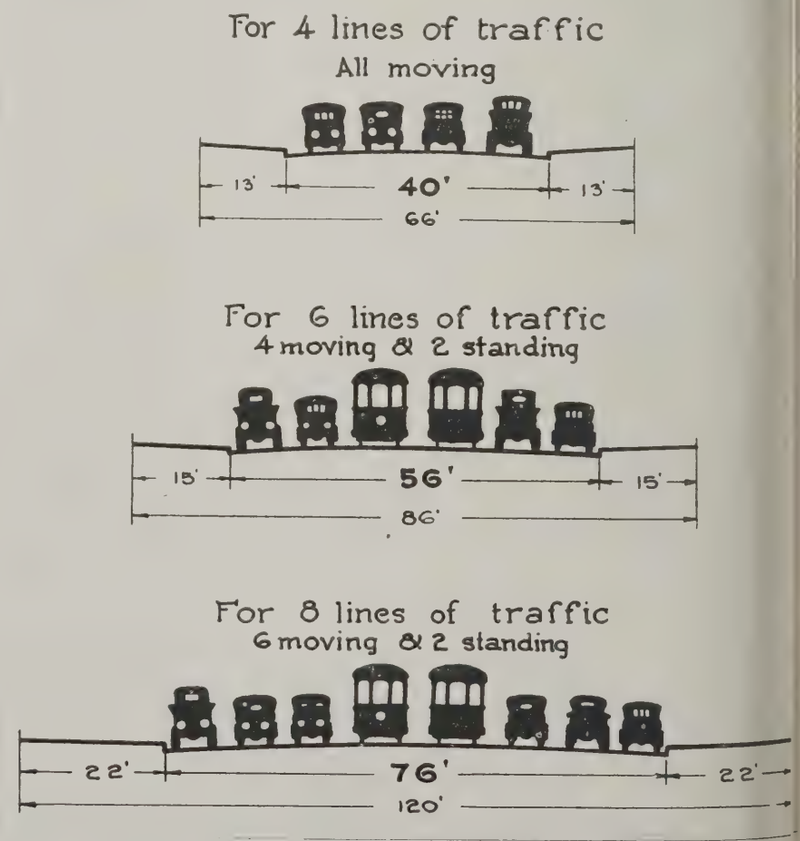
Competition Awards

Harrogate War Memorial.

Mr. Walter Cave, F.R.I.B.A., assessor, has made the following awards in the Harrogate War Memorial Competition: First, Messrs. J. C. Prestwich and Sons, architects, Lee, Lancashire; second, Mr. B. Howcroft, architect, Upper Mill, Lancashire; third, Mr. Norman Culley, architect, Huddersfield. The memorial is designed by Messrs. Prestwich and Sons in the form of an obelisk upwards of 70 ft. in height, which will be erected on a platform of raised steps, and at the base carved panels for the names of the fallen.

The Planning of Cleveland Thoroughfares

Messrs. Robert H. Whitten, city planning adviser, and C. E. Conley, engineer, have just issued a tentative thoroughfare plan for the City of Cleveland, and a diagram showing the normal widths proposed to be adopted for the roadways. As will be seen from the accompanying illustration, the normal width for the roadways is based on an allowance of 10 ft. for each line of moving vehicles, and 8 ft. for each line of standing vehicles. Where space is absolutely limited this unit allowance may be reduced to 9 ft. for moving and 7 ft. for standing vehicles. The sidewalk width above suggested may be increased or reduced to meet special requirements as to pedestrian traffic or special demands for a tree and lawn strip. The plan shows the existing thoroughfares and the roads which it is proposed to widen or extend.



PROPOSED WIDTHS FOR CLEVELAND ROADWAYS.

Correspondence

ification & Registration

the Editors of THE ARCHITECTS' JOURNAL.

,—In reply to the letter from Mr. Keen, that appeared in the last of your Journal, we beg to remind hat no amount of sophistry can *acts*, and that, at the moment, we t dealing with the Report of the ommittee to which he refers, with according to his own showing, the tion of the Council is at variance. ree with Mr. Keen that the first of solutions passed by the Unification egistration Committee, and sub- tly adopted by the Council of the IA., defines the scheme in the fol- words :—

"That the principle of scheme A, mely, the bringing of all the Archi- cts of the United Kingdom into embership of the R.I.B.A., be lopted as the basis for Unification."

ly is there no suggestion of any qualification in the above Resolu- ut, in addition, the introduction of rd "all" provides for *the admission R.I.B.A. of every individual member architectural profession in the Kingdom who desires to enter.*

lly, if, as Mr. Keen insists, the above tion of the Council does not mean t says, then it is the duty of that o make its policy clear to outside rs of the Institute. But, until this e, it is equally the duty of those ted in the welfare of the R.I.B.A. t out the dangers and difficulties have to face, consequent upon the of its governing body, in support- d adopting the present anomalous ischievous proposal.

GEORGE HUBBARD.
ALFRED W. S. CROSS.

the Editors of THE ARCHITECTS' JOURNAL.

,—With reference to your leading if Mr. Keen is correct in his con- that only approved and qualified cts are to be admitted to the te, and that other architects are to ected, then it is obvious he will the scheme for "Unification." is is a matter of absolutely trivial ance compared with the proposal n the doors of the R.I.B.A. and men less qualified than at present he passing of a Registration Bill. want Registration, and our mem- e being led to imagine that if we suggested we are going to get is is not "cricket," and, further, rossly misleading and unfair, for the Unification and Registration ttee nor the Council have had any opinion to support such a plea. R.I.B.A. Constitution League's int is to make the Unification egistration Committee's proposals ver they are) part of the Registra- ill, and not to admit men except the present examination system Registration Bill be passed. We this simple business-like procedure consideration of our members, doing so we note with pleasure that -committee of the Unification and ation Committee wisely resolved ue "Dental Bill will form a valu- able precedent when preparing a Registration Bill for Architects." That Bill provided for the admittance of partially qualified men within "one year from the commencement of this Act"; they were not so foolish as to admit them before.

Your Journal published the scheme of the American architects for obtaining Registration, and we are grateful; your article was headed "A Model Form of Law for the Registration of Architects," and Sec. 20 provides that "Any properly qualified person who shall have been lawfully engaged in the practice of architecture in the State at the time this Act takes effect, may be granted a Certificate of Registration without examination," etc., etc.

Let us be guided by the dentists and the American architects.

STANLEY PERKS.

Dear Bricks

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—If brick manufacturers were to follow the maxims in the Sermon on the Mount they would soon be bankrupt. "Buy in the cheapest market and sell in the dearest" is the only precept to be followed. I might point out that if we could obtain orders for bricks at a price that would cover cost of manufacture plus a very small profit, they would be readily carried out. Many fields are on short time, not with an idea of keeping prices up, but because they cannot possibly afford to keep going at the prices most people are willing to pay.

MANUFACTURER.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The interesting correspondence now proceeding in your columns on the production of bricks leads to the enquiry whether all avenues have been explored for supplying the deficiency now existing at a reasonable cost.

Fully aware as I am of the defects of the much condemned sand-lime bricks, I think the time has arrived when more use might be made of an improved process of manufacture of this kind of brick, and I have in my office a sand-lime brick to which the appended remarks appear to apply. It is a matter of surprise that its usefulness is not taken more advantage of by architects, engineers, and contractors. The pre-war price of this brick was about 13s. per thousand, and it can be made now at a cost considerably below that of any brick on the market at the present time.

1. The plant required for the production of this brick can turn out every twenty-four hours 40,000 bricks ready for use in building, or more with slightly increased plant.

2. The brick withstands a compression test of 4,000 lb. per square inch, which increases with age, and shows absorption of 8 per cent.

3. The brick has been submitted to and approved by Government for housing schemes.

4. The process of manufacture has been adopted by a leading firm of engineers, and the brick has been used by a well-known architect.

5. The plant can be shut down or used as required.

6. 4½ in. and 9 in. brick walls can be built fair both sides, as they are of uniform size, so that an interior finish is obtained without plaster if required.

7. 4½ in. walls built with these bricks without damp-course or eaves gutter have stood for a considerable time without showing internal dampness. The bricks do not flake.

8. These bricks have been used as fire bricks under certain conditions.

ARCHITECT.

Obituary

Mr. F. W. Ranken.

Mr. Frederick William Ranken, head of the firm of D. and J. Ranken, builders and contractors, has died very suddenly at Sunderland. Mr. Ranken was one of the best-known builders in the North of England, and in 1911 was President of the Northern Counties Federation of Building Trade Employers. At the time of his death he was a member of the Executive Council, and for twenty-one years was treasurer of the Sunderland Association, being also president on two occasions.

Fatal Accident to Mr. E. M. May.

It is with deep regret that we announce the tragic death of Mr. Eric Maurice May, who was killed on January 11 in an accident to his car.

Mr. May was motoring from his home, Harperbury, Radlett, Hertfordshire, to the engineering works at Aylesbury, Buckinghamshire, of Messrs. Holland and Cubitts, of which he was managing director.

No one saw the mishap, but a labourer walking along an almost deserted country road near St. Albans found the car on its side and the dead body of Mr. May lying near. He was a most careful driver, and the only explanation seems to be that the car skidded on the wet road.

Mr. May, in addition to directing the affairs of the works at Aylesbury, was also an active director of Messrs. Holland and Hannen and Cubitts, engineers and contractors, of Gray's Inn Road, W.C.

A wonderful business man, he organized their factory during the war for the production of fuses, and he built, started, and ran the national aircraft factory at Croydon in a most successful way.

Mr. E. Wise.

We regret to announce the death of Mr. Ernest Wise, M.S.A., which occurred at Launceston, almost suddenly, on Monday, January 2.

Deceased, who was 65 years of age, was well known as an architect throughout North Cornwall. Many public buildings had been erected from his designs, the most recent in the borough itself being the fine premises of the Launceston Constitutional Club.

Sir William Matthews.

Sir William Matthews, the consulting engineer, whose works include the National Harbour at Dover, died on January 8, aged 77.

Sir William held the post of adviser on harbour works to the Admiralty and to the Overseas Dominions, and works in which he was the consulting engineer are to be seen in all corners of the Empire. Harbour building and pier-making were the business of his life. He filled the presidential chair of the Institution of Civil Engineers.

The Week's News

Proposed Girls' School for Bournemouth.

The Ministry of Health has sanctioned the borrowing of £9,300 for the purchase of land and buildings at Ascham House, Bournemouth, for the purpose of a secondary school for girls.

Building Trade Extras.

Draft proposals for a national agreement covering all extras arising out of working conditions, in addition to the ordinary wages and working hours, have been submitted for ratification to the various unions affiliated to the National Federation of Building Trade Operatives.

A Mersey Tunnel.

A proposal to appoint a special committee to confer with the Government and local authorities concerned with the view to the erection of a bridge or tunnel connecting both sides of the river has been approved by the Liverpool City Council.

New Buildings at Gourock.

New municipal buildings are to be erected at Gourock. It is anticipated that the work will be commenced shortly, and the approximate cost is estimated at £12,000. A new police station will add to this figure. A large new school is to be erected at Dalmuir, Glasgow.

Hospital as War Memorial.

In memory of men of High Wycombe who lost their lives in the war, a hospital has just been commenced on a site given by the Marquess of Lincolnshire, Lord-Lieutenant of Buckinghamshire. About £33,000 is in hand for the building, and the committee have accepted the tender of a local firm to erect the hospital for £32,315.

The Wolseley Motor Building.

We are informed that the whole of the paving, wall linings, partitions, and posts to the lavatories on the various floors of the Wolseley Motor Building—illustrated in our issue for January 4—was carried out by The Art Pavements and Decorations, Ltd., of St. Paul's Crescent, Camden Town, London, N.W.1., in their Biancola.

Art in the Theatre.

An Exhibition of Art in the Theatre was opened in Amsterdam on January 14 by Mr. Gordon Craig. Its chief contributions will be concerned with theatre and stage construction, stage decorations, costumes, drawings, and photographs. The exhibition is intended to exert an educational influence on the Dutch public, for the country at present possesses no playhouse which is built and equipped in a modern way. The Panorama at Amsterdam is, however, to be transformed into a modern popular theatre.

The Reconstruction of the Manchester Hotel.

In our issue for January 4 we stated that the Ruboleum tile work in the reconstructed Manchester Hotel was executed by Messrs. Rowan and Boden. This, we are informed, is incorrect. The work was carried out by the Korkoid and Ruboleum Tile Company, of 562–568 Baltic Street, Bridgetown, Glasgow.

Largest Exchange in Europe for London.

A site in Wood Street, City of London, has been acquired at a cost of £50,000, for the erection of a new telephone exchange, which, on completion, will be the largest in Europe. The actual date when building operations will be commenced has not yet been decided. The plans have been prepared on the basis of the probable development of the telephone system during the next fifteen years.

Nurses' Hostel for Bournemouth.

A nurses' hostel, costing £14,000, has been given to the Boscombe Branch of the Royal Victoria and West Hants Hospital at Bournemouth by Mr. Walter Child Clark, of Michelgrove House, Boscombe. There is accommodation for a sister and thirty-three nurses, each of whom has a separate room. The architect was Mr. H. E. Hawker, F.S.I., F.S.A., of Bournemouth, and the builders Messrs. J. M. McWilliam and Son, Bournemouth.

Restoration of Chester Refectory.

The repair of the refectory proceeds apace, and its west end, roofless for centuries, is at last covered again. Disappointment has been expressed in some quarters that the new section merely carries on the existing roof to the west wall, and is not more ornate in character and like what the original roof may have been, but the plans have been submitted to the experts, including the Society for the Preservation of Ancient Buildings and Professor W. R. Lethaby, the architect of Westminster Abbey. All agree that the plan of the architect, Mr. Fyfe, is quite the best possible, apart from all considerations of expense. The simplicity of the roof, which will be white, will concentrate the eye's attention on the stonework of the great hall, all of it ancient and all of it beautiful.

Ballymena's New Town Hall.

At a meeting of the Urban District Council it was decided that Messrs. Jones and Kelly, Dublin, the first-prize winners in the competition, be appointed architects for the carrying out of the building of the new Town Hall, that they be paid £100 on account of such appointment, and that they be instructed to prepare the necessary plans, specifications, and tails required for putting the contrac the market as soon as prices warrant

Sites for Industrial Development in S. Africa.

The Benoni Municipality, Far E Rand, has acquired the whole of the angle formed by the Benoni railway and portion of the Benoni township the north, and the Dunswart-Klein tein section of the Boksburg-Springs on the south. This, when the devia is completed, will provide several hun industrial sites along the railway li The Brakpan Municipality, it is un stood, is negotiating for similar contr a large area of ground which will estab it as a large industrial centre.

London's Garden City.

Substantial progress is being made the new garden city of Becontree, wh the London County Council are buil on the market-garden lands of Bark Ilford, and Romford. Three thous houses are now well in hand, and p are being prepared for the fourth th sand. No fewer than 5,000 men are stantly employed on the work, and houses are being completed at the rat forty a week.

Ten miles of roads have been c menced, and twenty miles of drains h already been laid.

In the lay-out ample sites have b left for churches, public buildings, but the erection of these is to be lef public and private enterprise.

Students' Evening at R.I.B.A. Galle

The Board of Architectural Educa have arranged to hold a special Stude Evening in connection with the Exh tion of Prize Drawings in the gall of the Royal Institute, on Wednes January 25, at 8 p.m. Students f the Architectural Schools, and oth are cordially invited to attend, several professors and teachers will present who will give information gl informally on different points of inte No cards of admission are requi Light refreshments will be provided.

HOUSE AT BERKESWELL. CROUCH, BUTLER, AND SAVAGE, ARCHITECTS.

The Furness-Withy Building.

our issue for January 4 we stated the ventilating machinery in the building at Leadenhall Street for s. Furness Withy was supplied by s. Ozonair, Ltd. This, we are ned, is incorrect. The whole of the apparatus were supplied and erected lessrs. Pinching and Walton, of 52 on Street, London, E.C.4, general lectrical engineers and contractors.

Trade with Morocco.

C. R. B. Atkinson, M.B.E., His ty's Commercial Secretary for cco, who will shortly leave England oceed to his post, is at present at Department of Overseas Trade, and be pleased to make appointments January 25th to interview firms re desirous of obtaining information the possibilities of extending their with Morocco. Firms who wish to the opportunity of consulting him d communicate with the Depart- of Overseas Trade, 35 Old Queen t, London, S.W.1, quoting the nce 3617.T.G.

atalogues, etc., Required for Iraq.

ormation has been received in the rtment of Overseas Trade that the tor of the Public Works Department, ad, Iraq, is anxious to obtain cata- s, designs, specifications, prices, of the following machinery and ment: excavating machinery, pip- id pipe fixtures, steel bridges (ready ction), cement and concrete mixers, y plant, brick and tile-making nery, portable lime kilns using oil fuel, wood-working machinery, ic lighting and power plant, pump- ants, portable wooden houses with e roofs and walls, refrigerating atus, small electric lighting sets, ans and accessories.

w Assurance Building for Durban.

s reported that a site belonging to s. Steel Murray & Company in n has been purchased on behalf of ational Mutual Life Association of lasia. The present building will molished and a new one erected. l Kingdom manufacturers of mate- ikely to be required for the new g may deem it desirable to furnish ajesty's Senior Trade Commissioner uth Africa with copies of their gues and price lists so that these e submitted in the right quarter as as possible. Such literature should idressed: His Majesty's Senior Commissioner in South Africa, Box 839, Johannesburg.

London Toll Exchange.

e the London "Toll" exchange was l in September last, there has been ly increase in the use of the service. "Toll" exchange deals with all one calls to places which are out- e London local service area, but a distance of approximately -five miles radially from the centre metropolis. Some 350 calls are daily by telephone users to ks," whereas the wanted numbers hin the "Toll" area. It is in the ts of telephone users themselves id the delay thus caused; they are re asked to pass all calls for places within the "Toll" area to the "Toll" exchange, in accordance with the list contained in the preface to the London Telephone Directory.

Modern Industrial Art Exhibitions.

The British Institute of Industrial Art, of which Sir Hubert Llewellyn Smith, G.C.B., is chairman, is opening an Exhibition of Present Day Industrial Art, to be held, with the sanction of the President of the Board of Education, in the North Court of the Victoria and Albert Museum, from January 16 to February 25, inclusive. The endeavour of the organizers is to bring to the notice of the public the latest productions of both manufacturers and craftsmen. The exhibits, which are chosen by expert selection committees in the various divisions, will consist of the following main sections: textiles, metal-work, ceramics, printing and allied industries, and furniture, the last-named being displayed as a series of rooms.

It is felt that this opportunity of inspecting a wide range of British artistic products of to-day in the midst of the national collection of examples of industrial art of the past will afford new opportunities not only to manufacturers and designers, but to the purchasing public. On the termination of this exhibition the collections will be sent for further exhibition to Bradford, Birmingham, and other important industrial centres. Admission is free, the hours of opening being 10 a.m. to 5 p.m. on weekdays, and 2.30 p.m. to 5 p.m. on Sundays.

London County Westminster and Parr's Bank.

The net profits of the London County Westminster and Parr's Bank, Limited, for the past year, after providing for bad and doubtful debts, and all expenses, amount to £2,167,845. This sum, added to £460,914 brought forward from 1920, leaves available the sum of £2,628,759. The dividend of 10 per cent. paid in August last on the £20 shares and 6¼ per cent. on the £1 shares absorbs £579,526. A further dividend of 10 per cent. is now declared in respect of the £20 shares, making 20 per cent. for the year; and a further dividend of 6¼ per cent. on the £1 shares will be paid, making the maximum of 12½ per cent. for the year. £500,000 has been placed to contingent fund, £250,000 transferred to bank premises account, and £200,000 to rebuilding account, leaving a balance of £519,708 to be carried forward.

R.I.B.A. Council Meeting.

The following notes are from the minutes of the last Council meeting of the R.I.B.A.

London Building Acts Committee.—On the recommendation of the Practice Standing Committee, it was decided that the question of higher buildings for London should be made the subject of discussion at a General Meeting.

Local Building By-Laws. — On the recommendation of the Science Standing Committee, it was decided to form a Joint Committee to consider the advisability of establishing a new building code which, while it will ensure safe construction, will at the same time confer freedom from onerous and unnecessary restrictions which were imposed nearly half a century ago, and which in a great number of instances remain unaltered.

New "Recognized School."—On the recommendation of the Board of Architectural Education, the Degree Course of the Armstrong College, Newcastle, was recognized, on the usual terms, as exempting from the R.I.B.A Intermediate Examination.

Membership.—The applications of six candidates for the Fellowship and eighty-five candidates for the Associateship were approved.

Standard Specification for Sand Lime Bricks.—At the request of the British Engineering Standards Association, Mr. H. D. Searles-Wood, Vice-President, was appointed to represent the Royal Institute at a Conference on the subject of a proposed standard specification for Sand Lime Bricks.

Retired Fellowship. — Mr. George Edwards (elected Fellow, 1886) was transferred to the class of Retired Fellows.

The British Empire Exhibition

An interesting ceremony took place at Wembley Park last week, when the Duke of York inaugurated the commencement of work on the British Empire Exhibition buildings by turning the first turf on the site.

An anonymous donor has undertaken to be responsible for the last £80,000 of the minimum £1,000,000 required until individual guarantees for this amount have been forthcoming. A beginning was actually made in the course of the day, thanks to this generous aid, with the provision of work for the unemployed, whose number the work to be accomplished is expected to reduce considerably.

The objects of the exhibition are, it is stated:—

(*a*) To find fresh sources of national wealth in the development and utilisation of the raw materials of the Empire.

(*b*) To foster inter-Imperial trade and find fresh world markets for Dominion and Home products.

(*c*) To make the different parts and peoples of the British Empire better known to each other, and to focus public attention in this country on the illimitable possibilities of India and the great Dominions overseas, as well as of the Crown Colonies and Dependencies—"our vast undeveloped estate."

Initiated by Lord Strathcona as far back as 1913, the scheme of the exhibition was revised in 1919, the King graciously according his patronage. The site, consisting of 125 acres, partly flat and partly undulating, presents unrivalled advantages from a traffic point of view, and the natural features of the ground selected, which has an outflow to the River Brent, are particularly attractive, with its belts of oak, beech, and elm trees and the like. The executive council desire to preserve all contours in the main, and except in connection with the construction of the sports arena the natural features of the site will be maintained.

Mr. John W. Simpson and Mr. Maxwell Ayrton will be the architects of the

exhibition buildings, which will be of a permanent nature and the finest of their kind in the world. They are to be constructed of steel and concrete, and after 1923 will become the home of the British Industries Fair and other periodic exhibitions. Included among them will be a great hall for the display of products and manufactures of Great Britain, and five halls for exhibits from the Dominions and Colonies. There will be also two main courts, the Empire Court and the Dominions Court. Mr. E. O. Williams has been appointed the consulting engineer to the exhibition.

A new sports arena is to be arranged on a hill top dominating the whole of the site. It is intended to provide accommodation for 125,000 spectators, with seats for 30,000 in a stand overlooking the arena. The Royal entrance will pass under the grand terrace, 360 ft. long and 35 ft. wide, on the northern front of this structure, giving access to a banqueting hall to accommodate more than 1,000 guests. Progress will be made forthwith with the work of clearing the site of the sports arena and constructing a railway siding.

His Royal Highness was received at the golf club house by Lord Morris (chairman of the executive council), Lord Southborough (chairman of the Finance Committee), Sir Richard Vassar-Smith (chairman of the Guarantee Committee), Mr. Robert Donald (chairman of the Publicity Committee), and Mr. U. F. Wintour (general manager). Among those presented to H.R.H. were Mr. R. H. Selbie (general manager of the Metropolitan Railway and deputy chairman of the Wembley Park Estate Company), the chairman and members of the Wembley Urban District Council, Mr. John W. Simpson and Mr. Maxwell Ayrton (architects to the exhibition), Mr. E. O. Williams (consulting engineer to the exhibition), and Mr. Robert McAlpine (of Sir Robert McAlpine and Sons, contractors).

Lord Morris in inviting His Royal Highness to turn the first turf, said that those concerned in the inception of the exhibition hoped that it would result in the development of trade and commerce. They wanted to discover why an Empire like ours, containing everything that its people could require in the way of raw materials, should be constantly going outside and giving labour to other countries.

The Duke of York, who was loudly cheered on rising to reply, after expressing his pleasure at being present to inaugurate this great enterprise, said: I am glad to learn that the results of the Prince of Wales's appeal at the Mansion House last October have been so satisfactory, and that less than three months from the date of that meeting the guarantee fund has been brought to over the minimum million which was asked for. I understand that this total was only completed last Saturday, and the fact that the work is being begun on the following Tuesday augurs well for the future of the project, and speaks volumes for the efficiency and energy of the organizers. I confess that one of the reasons that gives me the greatest pleasure in taking part in to-day's ceremony is the fact that more work, at all events, may be found at an early date to help that vast army of men who, through no fault of their own, are suffering anxiety and distress from unemployment.

I learn, too, with interest that the turf I am about to turn marks the entrance to the National Sports Ground. I am one of those who believe in sport, and believe that the more opportunities we can give to the people of this country to take part in and witness our national games the better it is for their health and happiness, and for the development of all those qualities which have made this Empire great. I wish this important Imperial enterprise and those engaged in it every possible success.

The company next proceeded to the site of what was once Wembley Tower, where the Duke of York turned the first sod. On behalf of the contractors, he was presented with a gold cigarette case by Mr. Robert McAlpine.

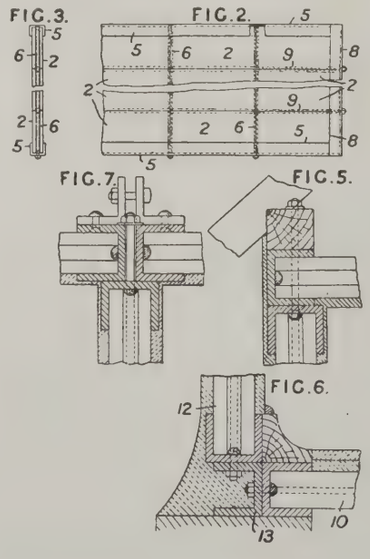
Trade and Craft

Passenger Lifts at New London County Hall.

Messrs. Waygood-Otis, Ltd., of 54 and 55 Fetter Lane, London, E.C.4, are installing five first-class electric passenger lifts in the New London County Hall.

Steel Castings.

Messrs. Stewart and Lloyds, Ltd., of 41 Oswald Street, Glasgow, have issued a small threefold leaflet on steel castings. The company make steel castings by the Electric and Tropenas processes, and their foundry is equipped to deal with castings up to six tons in weight, and is specially designed for turning out the following and other high-class goods: high permeability castings for electrical work, marine castings having a tensile strength of 28 to 32 tons per sq. in. of section with a minimum elongation of 20 per cent. in a length of 2 in., or to Admiralty, Board of Trade, Lloyd's, British Corporation, etc., requirements; gearing of all kinds, machine-moulded from the firm's tooth-blocks or from customers' patterns, having (unless otherwise specified) carbon 0.4 to 0.5 per cent. for long wear, turbine castings, turbine end casings, bucket wheels, etc.; wheel blanks for machine-cut gears; hydraulic castings, such as cylinders, glands, and flanges; pipe and valve castings.



PATENT SYSTEM FOR SLAB BUILDINGS.

Castings for quartz and stone-breaki machines: rollers, shells, mantles, a concaves for Gate's rock-breakers; a toggles, side cheeks, and steel jaws stone-breakers. Manganese steel ca ings for dredging or crushing machine or for any purpose where the castir require to stand heavy wear and still tough. General machinery castin having a tensile strength of 30 to 35 t per sq. in. of section, and an elongation 20 to 30 per cent. in a length of 2 Being on the Admiralty, Board of Tra and Lloyd's Lists for steel castin the company are regularly executi orders to these and other well-kno inspections.

Latest List of New Inventions

Latest Patent Applications.

34875.—Blaw-Knox Co.—Wall form mould. December 28.

35145.—Chicken, C. B. — Paving-fla etc. December 31.

34993.—Flower, E. A.—Reversible c ment window. December 3c

34783.—Hayes, A.—Building-slabs, method of building walls the from. December 28.

34801.—McNay, J. T. — Metal bond stirrups or ties for bars of r forced - concrete structu December 28.

34866.—Rogers, H.—Angle-bars and bars for constructional w December 28.

Specifications Published.

172669.—Sentrop, Jun., J.T.—Const tion of flooring or the like.

172794.—Malcolm, D.—Wall-ties.

172800.—Locan, T. A.—Building struction.

169947.—Andre, H. — Prosceniums theatres and the like.

172883.—Smith, W. H.—Mortar plates for use in erecting holl block structures.

Abstract Published.

171417.—Slab buildings. — Forster, Woolston Tannery, and Lachlan, P., 31 Church Str both in Warrington.—In a s building, the walls, floors, ceilings are formed of m framed sections compri grooved blocks or slab clamped between channel 5, 8 by tie-rods 6, 9. The w etc., may be formed of si large sections or of several tions secured together. blocks may be concrete, eart ware, or wood, and the ba 8 may be of H or other sec and may be of precast crete, wood, etc., The sec may be preformed or be in place. The wall sectio may be connected to the sections 10 by the tie-roc other bolts, either directly junction bars 13. Fig. 7 s the connexion of two ce over a partition wall.

The above particulars are specially prepar Messrs. Rayner & Co., Registered Patent Age 5 Chancery Lane, London, from whom readers Journal may obtain all information free relat patents, trade-marks, and designs. Messrs. Rayne will obtain printed copies of the published specifi and forward on post free for the official price of 1/

nesday, January 25, 1922. Vol. LV. No. 1412

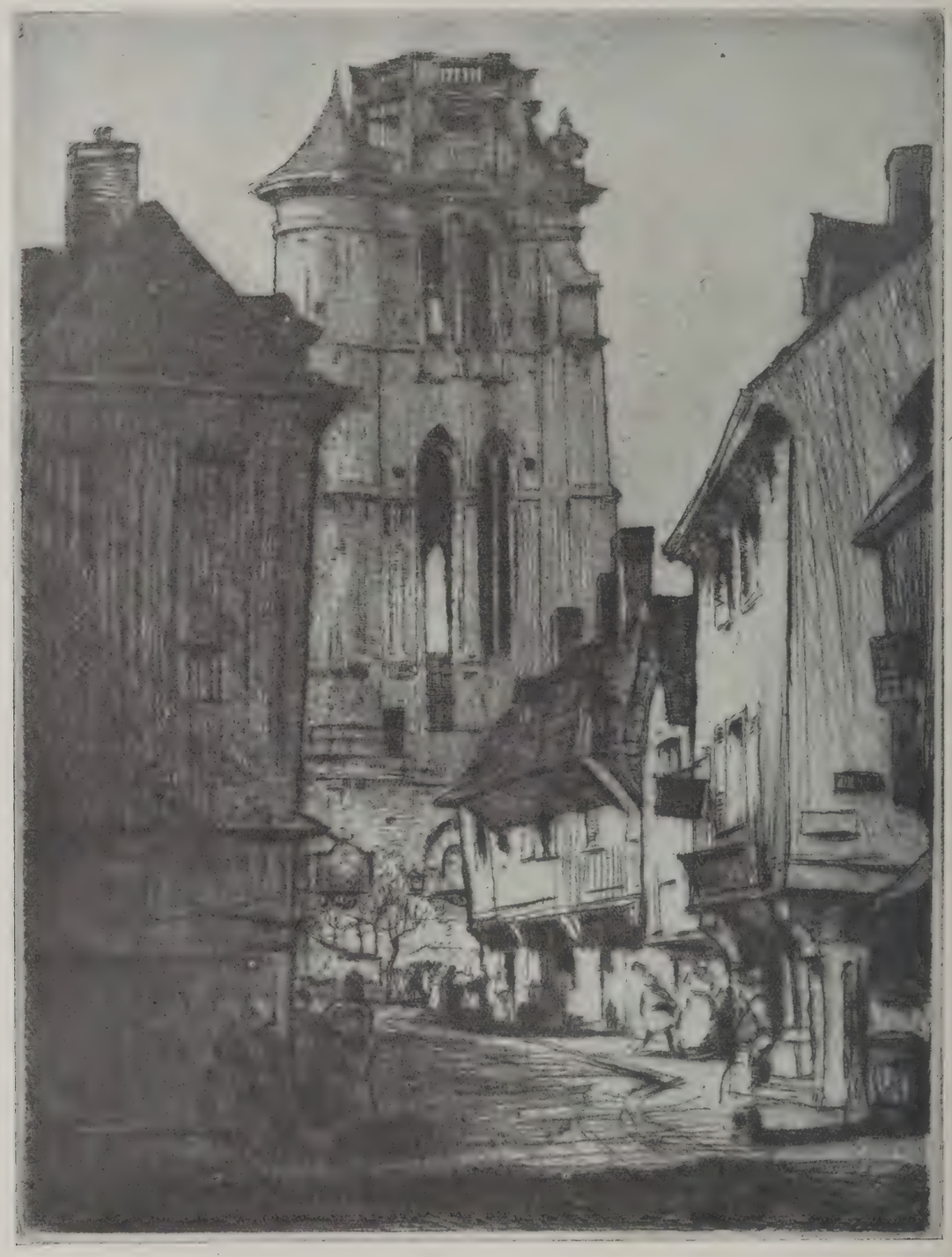
THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

AN ARCHITECT'S LIVING-ROOM.

27-29 Tothill Street, Westminster, S.W.1.

St. Etienne, Beauvais : From an Etching by the late Alick G. Horsnell



The exhibition of etchings now on view at the Architectural Association includes a small collection of the late Alick Horsnell's work, of which the etching here reproduced is a delightful example. The outline of the tower of St. Etienne loses itself in a very pretty way in the dark roof on the one hand, and in the high chimney on the other, while the sky is obviously treated as pattern rather than as a space. (A note on the exhibition appears on page 175.)

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

Wednesday, January 25, 1922 Volume LV. No. 1412

Sir Charles Ruthen and the Profession

AT last we have discovered, or, rather, Sir Charles Ruthen has discovered for us, the reason for the financial disaster of the Government Housing Scheme. We may in our innocence have attributed this failure to the rise in wages and the cost of materials; but no! it is the architects who are to blame.

Speaking at a recent meeting of the Society of Architects, Sir Charles, who is the President, and, as we should imagine the Society of Architects is beginning to find out, an extremely curious type of President, in his presidential address informed his brother architects that "The architect must share the prime responsibility of the financial disaster of the great State housing scheme."

If Sir Charles had only been speaking as President of the Society of Architects his words would have been serious enough; but when we remember that he is also Director-General of Housing for the Ministry, and that his wholehearted condemnation of architects has been reported extensively by the lay press, the position is for the Architectural Profession one of extreme gravity.

It may be that Sir Charles Ruthen as President of the Society of Architects fully believed that architects had not risen to the heights of their opportunity with regard to housing, and that it was within his province to address a wholesome homily to his own Society on the subject. If Sir Charles really believed this (though why he should do so we cannot conceive) then in common decency he should have made his observations behind closed doors with the general press rigidly excluded. But Sir Charles knew that he was not only addressing his strictures to the members of the Society of Architects, but was speaking to that general public which could scarcely be expected to draw nice distinctions between the President of the Society and the Director-General of Housing. He deliberately remarked: "I have set out to address these words to my own Society, and incidentally to others present, in the hope that I may startle the members of the profession into some definite form of activity."

We imagine that Sir Charles will not be disappointed, but whether he will altogether enjoy the form that that activity will take remains to be seen. He cannot imagine that either the R.I.B.A. or the Society can afford to let matters stand as they are; it appears to us that the only course open to both these bodies is to call upon Sir Charles Ruthen to justify his statements or to resign his membership.

Now, what exactly is the gravamen of the charges Sir Charles brings against the Profession? Perhaps it would be as well to give them in his own words: "The question I have asked myself over and over again is: Did the architect rise to the occasion, or did he creep out from his seclusion and practise his art with a benumbed and slow-moving mentality—taking so far as his opportunity permitted full advantage of the difficulties and trouble of the State—first to practise his art without consideration for the consequences, and, secondly, to earn fees, large ones if possible, without a thought of his master, the State, and without a thought of the effect of his actions upon the future of the profession? . . . The propagandist and housing reformer preached for many years before the outbreak of the war a new system of area development and a new system of house planning. The architect—*that is to say, the gentleman who works entirely for fees* (the italics are our own)—came into the thing just after the signing of the armistice. Did he assist to any appreciable degree those who had preached for years the enormous arrears in housing for the people, or did he forget his responsibilities to the State, if, indeed, he ever fully appreciated them, and his duty to architecture, and allow his pencil to run wild in the dream of the artistic home, and did he forget that the bankruptcy of the State would be the inevitable result? All these things require serious and concentrated study. *The architect must face the prime responsibility of the financial disaster of the great State housing scheme"* (again the italics are our own.)

Sir Charles Ruthen's idea of an architect, "as one who works entirely for fees," is, to say the least of it, an unfortunate one—we do not, of course, forget that Sir Charles is an architect—and we hope that he is only speaking for himself. His whole speech is a curious mixture of bitter vilification and muddle-headed argument. He speaks as if the housing reformer and propagandist had alone been responsible for new ideas in housing and development plans; and great as is the service that they have rendered to the community, we imagine that they would not have got very far if they had had no architects to give practical expression to their theoretical ideas.

Sir Charles speaks as if the advent of the architect into the housing arena coincided with the signing of the armistice. Does he forget, then, Port Sunlight and the architects that built it? Does he forget what Messrs. Cadbury's and their architects did at Bournville, or Messrs. Rowntree's and their architects at York? Has he never heard of Letchworth and Hampstead Garden Suburb and the architects that worked there?

If Sir Charles Ruthen had not himself practised as an architect we could the more easily forgive his easy assumption that art is necessarily expensive; but he, above all persons, should know better. For what does this railing accusation of his, when it is boiled down, amount to? That architects by the wild and lawless indulgence of their architectural fancies caused the cost of the Government houses to assume fantastic figures, and so wrecked the great Government scheme.

Even if it were true, which we emphatically deny, that the architects did attempt to overload their houses with costly and unnecessary detail, was there no Ministry of Health to exercise a rigid censorship? We seem to have heard of Housing Commissioners to whom plans had to be submitted. Did these gentlemen exercise no supervision over these wild and reckless profiteers?

No, no, Sir Charles! It is a little too thin! In your haste to find a scapegoat for the failure of the Government scheme, it is you who have over-reached yourself, and your failure as a Director-General of Housing to explain the housing disaster is only equalled by your failure as the President of the Society of Architects in your duty to your fellow architects.

Notes and Comments

"Sir Charles Ruthen's Bomb"

THERE is no need to add a single word to the indignant protests evoked by the recent crude attempt to load the architectural profession with the housing sins committed by the Ministry of Health. Mr. Keen's temperately worded and wholly dignified remonstrance, printed in our correspondence columns, together with several other letters of similar character and import, effectually disposes of Sir C. Ruthen's utterly baseless accusation against the architects. Its "inexactitude" has been also freely exposed in the daily newspapers. Still more scathing is the emphatic repudiation pronounced by the Society of Architects, who, at a special meeting of their Council last Wednesday (January 18), passed unanimously a resolution dissociating themselves from the views expressed by their President in his paper on "The Architect and the State," particularly as to the responsibility of the architectural profession for the failure of the national housing scheme." We direct the special attention of readers to the leading article which we publish in this issue, and to Sir Charles's explanation of what he really meant by his now notorious address.

Lincoln Cathedral in Danger

Sir Charles Nicholson, architect to the Dean and Chapter of Lincoln Cathedral, is supported by Sir Francis Fox, the eminent engineer, in reporting that it would be dangerous to delay repairs to Lincoln Cathedral. It appears that the north-west tower is in serious danger, the mortar holding its stones together being "of very poor quality." Exactly what that phrase is intended to imply is not evident from the report; but whether it means that the mortar was feebly constituted originally, or that it has "perished" with age, the effect is the same—the tower will have to be grouted from top to bottom. Sir Francis Fox, the pioneer of the application of the grouting machine to churches, has by its means brought many a noble building to a state of stability, giving ancient churches a new lease of life. With his engineering skill and ingenuity, and Sir Charles Nicholson's large experience in scholarly restoration, noble old Lincoln Cathedral (some of it was built in the eleventh century) will be in entirely safe hands. Funds are the main difficulty.

Professor W. R. Lethaby

Were Professor Lethaby as emotional as he is modest (which is improbable, if not impossible) he must have been deeply moved by the terms of the address presented to him last Wednesday, on the occasion of his retirement after eighteen years' service as Professor of Design at the Royal College of Art, South Kensington. It was indeed a touching tribute, expressed in language void of all suspicion of the cant of which he has, as those who prepared it know very well, an inveterate and a deep-seated hatred—the only sort of hatred in which so notably kindly a man ever permitted himself to indulge. Austere as he is known to be towards the demonstrativeness that is so often a mark of insincerity, he must have been touched by the tribute paid, and paid but justly, though affectionately, to his virtues as a man, and to his merits as artist, scholar, teacher, who, to quote the gracefully worded but not flattering address to him, has always "combined enthusiasm with good sense, devotion to ideals with fine scholarship, and wide executive knowledge with high executive ability." These qualities have been conspicuous in every aspect of his career—not least in his contributions to the periodical press and to books that he has either written or edited; and his scholarly contributions to this Journal, and more particularly to "The Architectural Review," have been always highly valued. He holds, indeed, a unique position among architects. His spiritual genealogy traces back to Philip Webb and William Morris, who had been succeeded in George Edmund Street's office by Norman Shaw, in whose office Mr. William Richard Lethaby was assistant. He began practice about 1890; but scholarship, teaching, and authorship have absorbed most of his energies. He wrote the monograph on St. Sophia in collaboration with Mr. H. Swainson; but the excellent account of "Westminster Abbey and the King's Craftsmen" is wholly his own; his position as Surveyor to the Fabric of the Abbey giving him peculiar facilities for producing so masterly a treatise. A title would be a fitting reward for one who has done so much to promote the national knowledge and skill in the arts and crafts. The splendid work he has done as Professor of Design at the Royal College of Art, and the high executive and administrative ability he has shown as one of the founders and directors of the Central School of Arts and Crafts, would alone entitle him to this measure of recognition, to which he has even larger claims.

National Federation's Annual Meeting

To-day the annual general meeting of the National Federation of Building Trades Employers is being held in the Connaught Rooms, Great Queen Street, London, W.C.2. Most of the business, it appears from the agenda, will be of routine and, so to speak, domestic character—amendments of rules, election of president and officers, and so forth; but a discussion on "the present situation of the forty-four-hours question" has in it, obviously, the germs of a national movement, and any decision on it at which the Federation arrives may have far-reaching consequences for the nation at large.

Building Trade Wages Adjustment

That "prevention is better than cure" seems to be the vitalizing principle of the National Wages and Conditions Council for the Building Industry. It has achieved remarkable results in the settlement of conditions of labour. This it has done by securing the workers' agreement to a sliding scale, so that the adjustment of wages has become to a certain extent automatic instead of arbitrary. Wages are not, and should not be, either as low as the employer might like to depress them, or as high as the worker would like to force them up. They are to go up or down in sympathy with the cost of living. This is not an ideal system, but it is good in as far as it substitutes hard facts in place of wish and whim, wilfulness and ill-temper, and it may very well contain the germ of some system, yet to be evolved, that shall make strikes and lock-outs unnecessary, if not impossible, or, alternatively, shall brand their instigators as criminal lunatics. How disastrously uneconomic trade disputes are is suggested in some annual statistics set forth in the current issue of "The Labour Gazette," from which it appears that the aggregate loss of working days in all disputes in 1921 was about eighty-six million!

Patching the Parthenon

Trepidation has seized the lovers of the Parthenon. It has scaffolding about it. On its north side the fallen columns and the architrave are to be re-erected, and Reuter's Agency has flashed round the civilized world the thrilling rumour that a compound of limestone and cement will be substituted for the missing blocks of marble. Although the Parthenon lost long ago its character as a temple—whether to St. Sophia, to Athena, to a Christian saint, or to Mohammed, its remains are sacrosanct even to those who have seen no more than a picture of them; and, all the world over, those who passionately esteem the Parthenon as the supreme model of architecture of the Western type—for are not the Taj Mahal and Santa Sophia rival but Oriental deities?—are trembling lest the mingling of cement with marble should profane or disfigure irremediably this fragmentary but incomparably precious temple of art.

Sir Charles Ruthen's Explanation

SPECIAL INTERVIEW

In view of the commotion aroused by his now notorious address to the Society of Architects, it seems important to discover what exactly Sir Charles Ruthen meant to convey by his allegations against architects, and whether or not his address as reported in the lay press expressed the views which the Director-General of Housing (and, therefore, the Ministry of Health) really held with regard to the Profession. To this end an interview was obtained with Sir Charles Ruthen by a representative of this Journal, the results of which appear below.

THE main motive of my paper, said Sir Charles Ruthen, was to point out that in the National Housing Scheme the Profession should have been so bonded together, so organized, that as the responsible head of the building industry it should have advised the Government from the very outset as to what steps to take or not to take; that the profession, in fact, by the authority of its great knowledge of the matter in hand, should have been at the very fountain head of the whole scheme, competent to advise on all matters.

As to announcements appearing in the lay press, a great deal has been made out of one or two telling phrases. I know that owing mainly to reasons of limited space only bits of one's paper appear in the columns of the press—bits which are likely to make effective headlines. My paper cannot be judged by individual sentences taken out and put together to support one particular point of view. And what is more important from the professional point of view, and a point on which I would lay great stress, is that in several instances my remarks have been put in a wrong light by attributing them to the President of the Society of Architects, and not to the Director-General of Housing. This matters a great deal, for it changes the whole character of my address.

When I spoke, I did not speak as the President of the Society of Architects. I spoke simply as an architect who was qualified to deal with the subject from the knowledge gained as Director-General of Housing. The title of my paper was "The Architect and the State," and the whole aim and object of my paper was to discuss the relation of the Architect to the State, as it is and as it should be; and, as I said in my paper, I wanted to be understood as discussing all these matters with the efficient young struggling practitioner—the backbone of the profession. In some reports I am made to say that "the architect must face the *main* responsibility of the financial disaster of the great State Housing Scheme." My words were "prime responsibility"; "prime," because the architect, as chief party in this great national effort, should be first to take the responsibility.

SIR CHARLES RUTHEN, F.R.I.B.A.

As to the expression "profiteering" which I used, the word has been given the dignity of separate existence. I said plainly that architects profiteered in their art, and in their art only. They expected more from housing in the way of artistic expression than the scheme was capable of affording. To quote from my paper: "Is the architect giving to the State in these essentially commercial days the services which the State has a right to demand? In other words, is the architect adapting his art to the needs and requirements of the present time? . . ." "There should be room for proper and efficient architectural intervention, and it is the duty of the architect to the State to formulate proposals whereby the architect comes in as part of economic National Housing.

"If the employment of professional assistance renders a building proposal uneconomic, there is a fault somewhere, and the profession must investigate and correct the wrong. Economic house building there must be. If possible, with architectural assistance."

Look at the Housing Scheme from its beginning. Those who began estimated that the total loss per house per annum should not exceed £10. This loss represents the difference between actual return per house per annum in form of rent obtainable and the normal economic rent return on such outlay.

The term of years in which the economic house clears itself of cost was taken as fifty to sixty years; £10 on a programme of 500,000 houses meant five million pounds. The country was prepared to pay this. This loss per house per annum soon increased to £15 on the programme of half a million houses. This was an increase of two and a half million pounds. In the early part of 1921 this loss had leaped up to an average of between £50 and £60 per house. In some cases it was less, and in some it was as high as £90 per house per annum.

Our representative put it to Sir Charles Ruthen that he had said in his reply to the discussion on his paper at the Society of Architects that "The amount of the work given out exceeded the capacity of the industry to do it," and that therefore the Government was wrong in its policy from the outset, and consequently architects could do little in face of this policy once it was resolved.

He said: This is so. I have already said "I do not acquit of all blame those at the head of this gigantic undertaking. Some of the initial steps were taken without a careful scrutiny of the forces waiting to waylay the unwary." Immediately after the war the building industry was in a bad state. A great number of men had not returned to the trade; it was not up to full strength. Even in the greatest days of building activity before the war the output has never exceeded 200,000 houses per annum.

The Condition of Lincoln Cathedral

SIR CHARLES NICHOLSON'S REPORT

THE following report on the condition of Lincoln Cathedral has been prepared by Sir Charles Nicholson, F.R.I.B.A., the architect to the fabric, with whose special permission it is here published :—

The condition of the north-west tower is serious if not dangerous. It is considerably out of the perpendicular, and the deviation is uneven, indicating that internal movement has taken place.

The tower is of three periods, and the eleventh and twelfth century lower stages have been altered and cut into by later builders. The walling here is of rubble faced with ashlar, and the mortar is of very poor quality, hence the uneven settlement is easily intelligible.

The tower has been reinforced with oak beams and iron ties, many of the lower openings have been walled up at different times, and the structure has been carefully watched, but slight movements have recently been observed, and every storm weakens the tower. In our opinion, therefore, the work of thorough repair has now become a matter of urgency.

The ground story is part of Remigius's eleventh-century cathedral, and has walls about 6 ft. thick built of rubble and faced with ashlar. There appears to have been an arch on the eastern side; this was walled up at the end of the eighteenth century. The north, south, and west sides were refaced late in the fourteenth century when the vaulting was added. Settlement has occurred in the vault, and one of the minor ribs has become displaced.

A doorway was roughly cut through the north wall in the fourteenth century, and the angle staircases were altered at the same time. The lintel of this doorway is broken.

The mortar in this part of the tower has perished very badly, and the rubble hearting of the walls now seems to consist of loose stones lying in dust.

The lower part of the tower is entirely enclosed in buildings, except the western face, and the walls are therefore readily accessible everywhere.

Method of Grouting

In our opinion this part of the tower can be made secure by thorough grouting of the whole of the walling by means of the grouting machine. This process is carried out from the base of the wall upwards in three stages : (1) Air is blown into the crack; (2) water is injected until it runs out in a clear condition; (3) cement grout is injected till it runs out on the wall faces, when it is stopped in with clay and the process continued until the crack will contain no more grout. The grout should be made of carefully selected Portland cement, properly seasoned, Earle's Pelican Brand having been found suitable, mixed with clean sharp sand in the proportion of one part of cement to two or three of sand; the correct proportion depends upon the nature of the sand used, and can best be determined by experiment in actual working so as to secure a grout which is both ductile and tenacious, and which neither expands nor shrinks appreciably during the process of setting.

Shoring in the ordinary sense of the word will not be necessary in the work contemplated, but certain precautions should be taken. For instance, when a section of wall is being dealt with, the openings on each side of it should be well strutted vertically and horizontally. When grouting is being done above vaults or arches the soffits should be plastered with clay and roughly centred and strutted. Stopping should be done on both sides of a wall that is being grouted. The work should be commenced at the bottom.

The intermediate stages of the tower are Bishop Alexander's work (twelfth century), and are of rather different construction from the basement, the walls being for the most part double, a 2 ft. wall with windows, a 2 ft. inner arcade, and a 2 ft. passage between them.

There is therefore much more ashlar work in this part of the tower than there is in the basement, and the construction is lighter and stronger; but the superincumbent load of the fourteenth-century belfry has caused some crushing, and it should be possible greatly to strengthen the injured piers and walls by grouting as recommended for the basement.

For the greater part of their height the Roman stages of the tower are flanked by abutting buildings, the three-storied western transept on the north, the nave on the south, the north aisle on the east, and the screen front on the west.

These adjacent parts of the cathedral should be grouted simultaneously with the tower where they abut against it.

The fourteenth-century tell-tale arch above the nave vaulting abuts against the middle floor of Bishop Alexander's work, which, from the character of the masonry, appears to start from the level of the vaulting inserted in the late fourteenth century over the basement story.

The Norman Work

The Norman work rises clear of abutting buildings up to the level of the nave ridge, and the western angles of the whole of Bishop Alexander's work contain staircases which are carried up through the fourteenth-century belfry.

This is a construction of practically solid piers, with traceried windows between, the central pier on each face of the tower resting on the crown of the central window in Bishop Alexander's work. This false bearing is probably the main cause of the cracks in the upper stage of Alexander's work.

Its effect can be very much neutralized by thorough grouting of the belt of plain walling forming the sill courses of the belfry. A further method of strengthening would be to build up the middle arch of Alexander's work on each face of the tower so as to give a direct bearing to the middle piers of the belfry, but this would add weight to the tower, and is not, therefore, in itself desirable.

The piers and parapets of the belfry can be grouted with advantage, and this can be done from inside the belfry.

Minor Repairs

The stonework requires considerable local repair, but this work is well understood as part of the routine of maintenance of the fabric, and need not be here specified in detail. The parapet should be reconstructed in such a manner as to obviate the need of iron cramps. This can be done by working new apex stones to the little arches, with good tailing pieces forming a coping to the wall which has been built to strengthen the open parapet, but which is now only connected to the latter with iron ties which are most defective and dangerous.

The repair of such details as the belfry louvres should also be attended to, and the system of auxiliary metal and oak ties and struts should be overhauled as an essential part of the work, though probably these are of no very great use.

Cracks in Central Tower

Regarding the cracks in the central tower : The conditions here in some degree resemble those in the north-west tower, the work being of various dates and the upper stage being in false bearing upon the double walled three-bayed intermediate stage.

The eastern arch of the lantern has subsided slightly, and its spandrels have been badly cracked, as were the eastern spandrels of the side arches. These cracks were repaired some ten years ago and have not opened since.

The cracks in the stage between the lantern and the belfry appear to have followed the subsidence of the main tower arch, and these do not appear to have increased; but the state of the tower and its daring construction give cause for anxiety, and we are agreed that it would be a wise and necessary precaution to grout the whole of this tower from the spandrels of the great arches up to the base of the belfry, and again above the belfry arches.

The parapets are in a ruinous state, and require very extensive repair. They are the work of James Essex, and though quite different from the original parapets they are so good in design that we do not advise any new departure in this respect.

The north clerestory of the nave is a double wall, the external face being arcaded; the shafts of the arcading have crumbled away, and many of the stones are missing altogether. Moreover, the external face of the wall is built in ordinary courses of about 12 in. in height whereas the inner arcading has monolithic shafts and fewer joints than the external skin. The natural result is that the wall has slightly buckled outward and has come away from the side cells of the nave vault.

Some iron dogs have been added to hold back the wall, but these are quite inadequate, and the proper remedy is

Lincoln Cathedral : The West Front

Photo : Mansell

The condition of the fabric of Lincoln Cathedral is causing grave concern, and an appeal is being made for funds with which to carry out the urgently necessary work of renovation. The north-west tower, according to Sir Charles Nicholson, whose report appears on the opposite page, is considerably out of the perpendicular, "and the deviation is uneven, indicating that internal movement has taken place." The great church was begun by Remigius about 1075, and it is thought that the west front may have suggested that of Peterborough.

ace the missing external shafting and pin up the joints. This wall might be grouted, but the essential remedy is to stop the buckling movement.
he nave vault is sound, but a good of the plastering is loose and should epaired, as portions falling from such ight are alarming and dangerous.
he south transept has not been over- ed for many years; the clerestory vaulting are in similar condition to of the nave, and require similar tment.
ther minor repairs to the pinnacles, pets, etc., are required throughout church, and have been specified in various reports submitted annually he consulting architect to the Dean Chapter.
he cost of these works it is impossible timate at present. An annual outlay £10,000 for the next five (?) years it see the work through and secure e parts of the fabric which were not in order in 1880–90, and the Minster tshops have been now equipped to with such work with the utmost ible economy.
ncoln Cathedral is a very bold and ng piece of construction; its situation markably exposed, and it is a subject thankfulness that the condition of fabric is no worse than it is. The is one of the most skilfully designed vaulted buildings in Europe, its points of support being smaller and more widely spaced than in any equally large church; and, although its external height is not great, it has stood the test of time in a way which more ambitious buildings on the Continent have failed to do. The towers are also wonderful examples of engineering skill, and the church is of unrivalled beauty in many respects.

It would be a disgrace to the present generation to allow such a fabric to become ruinous or to deteriorate for lack of preservative measures which would not cost a hundredth part of the capital outlay which our forefathers expended on its construction.

Building in Sound

Abt Vogler never reared a palace of music fairer than that which was builded before the eyes of members of the Architectural Association on Monday in last week. The occasion was a "lecture on 'Building in Sound' illustrated at the piano," but Mr. Frank Hutchens, who is professor at the Sydney Conservatoire of Music, gave his audience a treat such as lecture-goers seldom enjoy.

A few pertinent, albeit delightfully informal, remarks on the inter-relationship of the arts introduced a wealth of musical explanation and illustration, and a succession of familiar works was endowed with new and wider meanings, and one or two less-known pieces added a spice of delicious unexpectedness to the feast.

Music, said Mr. Hutchens, was a mental stimulus, and knowledge of it could not but be useful, but there was a lamentable lack of intelligence in the attitude of the sister arts. The laws of architecture were clear and consise, those of music were intangible, but many terms—form, harmony, rhythm, balance—were common to both. All art is a discovery capable of no explanation apart from reason; but, whatever may be its expression, it is inspired by the same fundamental spirit. Form, for instance, so obvious in building, was only gradually unfolded panorama-wise in music; but it was there nevertheless, and in both arts form and balance were essential to enable work to stand the test of time.

Dwelling on the importance of contrast, Mr. Hutchens played some Beethoven extracts, aptly illustrating the dramatic value of the element of surprise, and of the greatest effect of all—silence. From Beethoven and Chopin also he demonstrated the sweet uses of harmony, which he described as a form of decoration. Simple themes, he said, delicately varied, rest the ear even as harmonious architectural embellishments refresh the eye. There was all the difference, however, between the charm of successful variations and the detestable affectation of art which was extraordinary for the sake of extraordinariness, clever for the sake of being clever.

A little Hindu song of Rimsky-Korsakoff's afforded convincing illustration of the hypnotic influence of even rhythm, and a dazed audience, shaking itself into sufficient wakefulness to clamour for more, may possibly have wondered whether an ordered reiteration of forms in the designs of their creation would produce the same effect on passers by.

Passing on to the vexed question of realism, the lecturer pointed out that the artist sees the inward reality of a thing, and does not attempt a literal portrayal of its outward features. Rather, he seeks to arouse the same emotion by his own methods. Ravel and Debussy had achieved amazingly successful aquatic effects, and a Scriabin Nocturne afforded a fine example of the classical method, with its contrast in tone and subtly thought-out note values.

The art of illusion came into music not less than into architecture, and Mr. Hutchens instanced the feeling of size and progress given by a swift alternation of high and low, of large and small.

Chopin, Liszt, and an entrancing little cradle song by, we believe, a Finnish composer, brought the recital to a triumphant conclusion. Words and music alike gave infinite food for thought. Mr. Hutchens did not press his points or labour his analogies. He just showed what musical expression of fundamental laws could accomplish. Architecture is merely a different medium: when will it regain the power of producing the same effect, arousing similar emotion? That may come. At the present day one is tempted to re-echo the conclusion of Browning's "Abbé": "The rest may reason and welcome: 'tis we musicians know."

E.N.B.

MR. FRANK HUTCHENS AT THE ARCHITECTURAL ASSOCIATION.

Correspondence

Sir Charles Ruthen's Charges against Architects

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Sir Charles Ruthen has set out to defend the Ministry for which he is acting by throwing discredit on the members of his own profession. He holds the office of President of the Society of Architects and also that of Director of Housing under the Ministry of Health. It can hardly be thought that he is speaking as an architect in making his attack; it is too ill-founded and inaccurate for that to be the case, and it is gratifying to hear that the Society of Architects is taking prompt steps to deal with Sir Charles Ruthen's pronouncement.

His contention that architects are to blame for the high cost of housing is entirely without foundation, for the standard of housing, based on that advocated in the Tudor Walters Report slightly lowered, was imposed by the Ministry from the outset. The details of accommodation and construction were set out and insisted on by them. They prescribed the areas of rooms; the number of houses to the acre; they issued model plans; they made model specifications, and they reviewed and revised the plans submitted to them in minutest detail. The architects on their part studied the problem with scientific precision in order to secure economy of material and arrangement; the gables that Sir Charles deprecates were used in order to save brickwork by lowering the main walls rather than for the purpose of artistic effect.

By degrees, as prices increased, the Ministry reduced their own standard to some extent, omitting bedroom cupboards and fireplaces, depressing roof slopes, and cutting down shelving and other small items to an absolute minimum. The high prices were due on the one hand to the labour policy of the Government, and on the other hand to interference by the Government with the normal manufacture and supply of materials; they were no more due to architects than to stockbrokers.

A very telling instance of the effect of interference with the supply of material comes recently from Colchester, where the housing scheme was approved upon condition of the bricks being obtained from the D.B.M.S., and these bricks are costing 12s. 1d. per thousand above the open-market price.

It would be easy to fill many of your columns with a discussion of the housing matter from the architect's point of view, but my purpose in writing is to protest against excusing the abandonment of housing by allocating to architects the blame that belongs entirely to the ill-advised policy of the Government in the matter of wages and the supply of building material. Labour must not be blamed, because its political weight is great; builders must be handled gently, because their vote is a large one; architects are few, and may safely be shot at, but the shooting should not be done by one who claims membership of the profession.

As far as the accusation of profiteering is concerned, I need do no more than remind Sir Charles that the fees we agreed with the Ministry are rather less than one-third of our ordinary fees, and that he himself was one of the deputation by whom the arrangement with the Ministry was originally made.

Your obedient Servant,
ARTHUR KEEN,
Hon. Secretary, R.I.B.A.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The deplorable part of this address is, of course, the charge made against architects in respect of housing. The accuser, however, does not seem very certain of his statement. We are told that architects have been the promoters of an energetic and expensive housing policy for their own ends, and they are also blamed for "creeping out of seclusion with a benumbed and slow-moving mentality" long after "those who had preached for years the enormous arrears of housing for the people" were up and doing.

Who are "those"? Presumably not the architects, because the profession is blamed for the very thing that brings the mysterious "those" high praise. But does it matter? No reasonable man blames the promoters of the housing movement, whoever they may be, because, like many other people, they failed to see through the fog of emotionalism and political propaganda which masks the danger of establishing a politically controlled and guaranteed market.

There is neither reason nor justice in this address; but if Sir Charles is going into politics, it may perhaps be understood from that point of view. Some politicians start that way.

An important part of the address charges architects with a lack of civic sense. It is true, but why stop at the architects? As much can be said of any other profession or group of people. But what are the remedies? Sir Charles suggests nothing.

Yours truly,
WILLIAM HAYWOOD, F.R.I.B.A.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—If Sir Charles Ruthen's charge, that architects are responsible for the partial failure of the Government housing scheme, be proven, it is the most serious blow that the profession could receive at the present time. I deny that this is the case for the following reasons:—

1. That from the initiation of the housing campaign architects were influenced by political cries such as the Premier's "Houses fit for Heroes." If, then, they endeavoured to design pleasing-looking houses, they were surely justified under such a stimulus.

It was equally suggested by politicians that it was a question of houses or revolution. If the architect saw that there could be no economic return in rent from the houses he was instructed to erect, he was justified in taking the Government's own view that a large proportion of the outlay must be regarded as written off as a bad debt to exceptional circumstances.

2. That the Ministry's own regulations as to number of houses to the acre, access to backs of houses, etc., prevented the adoption of very economical gro ing such as terrace houses.

3. That by the Ministry of Healt requirements as to sizes and heights rooms, architects were tied hand a foot, while the adoption of the Stand Specification equally settled almost details of construction.

4. That at all stages of the proced submission of lay-out plan, submiss of house plans, submission of tenders, officials of the Ministry were able control and check any extravagance design or construction.

In conclusion I beg to submit that measure of failure in the housing sch is not the fault of architects; rather i the fault of the Government in fail to foresee the effect of throwing a v scheme of house construction at country at the moment when the build trade was fully occupied with work layed by reason of the war.

I believe that architects generally h given of their best to Government ho ing, endeavouring with great patie under most trying circumstances, c trolled and fettered in all directions provide houses as economical as cumstances allowed and as pleasing means at their disposal permitted.

H. FRANKLYN MURRELL, A.R.I.

To the Editors of THE ARCHITECTS JOURNAL.

SIRS,—Sir Charles Ruthen's cyn attempt to saddle the architectural fession with the partial failure of Government housing scheme has na ally aroused the indignation of every who knows the facts, and would h caused equal astonishment were it poss in these days to be astonished at political manœuvre.

Sir Charles's charges have been c lenged in the press by men of weight leading, and need no confutation professional paper; but it may not realized generally how far these cha are the reverse of the truth, and to be hoped that the opportunity ma made use of to review the whole pos of the architect in connection Government housing. This position briefly be defined as one of responsib without control.

Far from his having been allowe run riot, the architect's designs and s fications have been too often so rigor pruned as to leave him the alterna of throwing up his commission or ma himself responsible for a poor typ design and accommodation, and a dard of construction and fittings b the requirements of ultimate econ Further, he has to submit to a syste inspection and control, the actual r of which is to make the carrying out work difficult or even impossible wi at times involving himself and his ployers in the risk of grave fina liabilities, while he is also called up undertake a large and increasing an of work quite outside the limits of ary architectural practice, for whi can claim no payment.

The high-handed profiteer of Sir Ch Ruthen's imagination is commonly r

ality a much tried man forced by his ssities into a position of embarrass- t and humiliation.

Yours faithfully,

ALLEN FOXLEY.

'o the Editors of THE ARCHITECTS' JOURNAL.

RS,—I should like to refute the state- t made by Sir Charles Ruthen that rchitects are to blame for the finan- failure of the State housing scheme. he size and style of all the houses been rigorously regulated by the stry of Health, architects cannot in way be blamed for the cost of the es, and they have had nothing what- to do with the purchasing of material. consider his speech a great injustice chitects of this country, who have, I t, succeeded in providing healthy, ortable homes for the people, and not led astray by the glowing ies of the wooden houses.

Yours faithfully,

J. H. BLENKINSOPP, A.R.I.B.A.

lby.

o the Editors of THE ARCHITECTS' JOURNAL.

RS,—With regard to the remarks re- y made by Sir Charles Ruthen in an ess to the Society of Architects, in rdinary course of events I should wel- the opportunity to send my views publication. You are, however, tless aware that I have been elected ie R.I.B.A. as a member of the depu- n to wait upon the Ministry of Health he purpose of endeavouring to arrive settlement with the Ministry on the tion of fees for abandoned work. e I personally would desire to send iews in the matter, I feel sure that cation of such views at the present ure might not be in the best interests ose members of the profession whom ve been honoured to serve. In any you will appreciate that I could not) without consultation with my col- ies who are to form the deputation.

I shall be glad if you will publish this letter in order that members of the profession generally shall not misunderstand the silence of the deputation.

Yours truly,

HERBERT A. WELCH, A.R.I.B.A.

High Cost of Materials

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—You are unquestionably performing a useful public duty in letting in light and air on the question of the prices of building materials. I say "public duty," because not only architects and builders are gravely affected by the exorbitant cost of materials, but, since building of all kinds is so urgent a national need, it is plain that the general business of the country is also suffering acutely from the same conditions.

Why is it that the Government does not intervene? You, sirs, supplied the reason, I think, in an editorial note in which you roundly accused the Government of being themselves guilty of forcing up the prices of bricks. They could not consistently prosecute other traders for being tarred with the same brush.

Any discussion of the morality or otherwise of "rings" or "combines" would be beside the mark in this correspondence. It is sufficient to the purpose to refer to the fact, which is notorious, that rings have a most injurious effect on trade. On this evil influence there ought to be some sort of check. In its origin, no doubt, the purpose and the influence of the "ring," "trust," or "combine" were good rather than evil. They arose, no doubt, out of a necessity to prevent rival traders from ruining each other by what was known as "undercutting." That purpose having been very effectively served, traders have gone to the opposite extreme. Combination to maintain prices at a profitable level has been abused in a determined effort to exaggerate those profits to an extortionate degree. L. P. L.

Kelling Hall, Norfolk

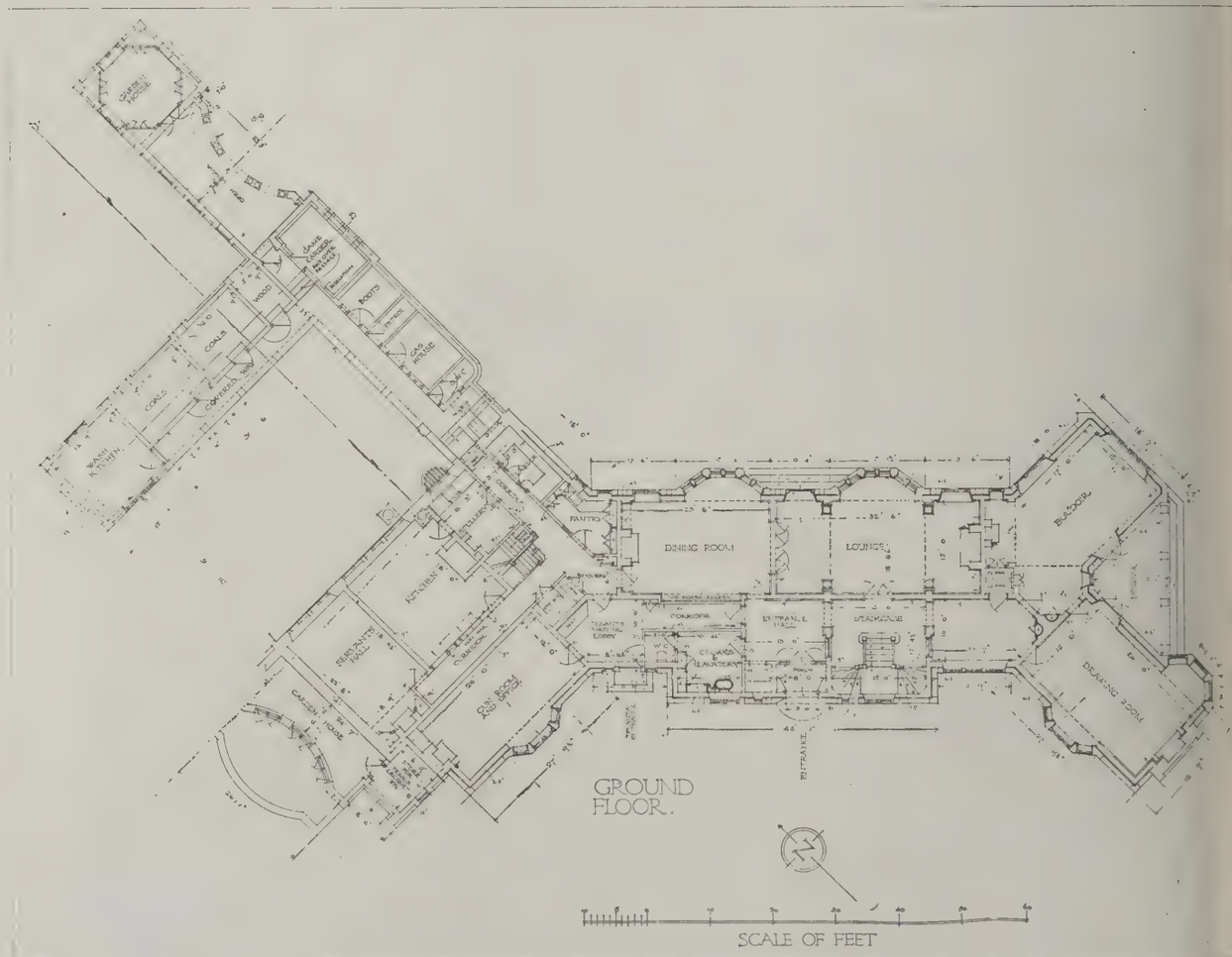
This very fine mansion was built during 1913–14 for Sir Henry Deterding, K.B.E., from the designs of Mr. Edward Maufe, M.A., F.R.I.B.A. It looks down a valley to the village of Kelling and the sea beyond. The fact that the sea here is to the north-east is the cause of the winged plan, i.e., all the principal rooms have the view to the sea and yet obtain the sun. The materials used are local flint from the estate, knapped and coursed, with small Dutch bricks (7 in. by 3½ in. by 2 in.) as dressings and binding courses. The bricks were landed at the little used port of Blakeney, a few miles away. The moulded bricks to the large bays on the garden side were made by Messrs. Collier, of Reading, to the Dutch brick texture and sizes. The roofs are covered with Grizzel grey tiles by the same firm.

Much work was carried out in the gardens, and large ponds were formed by damming the valley below the house. The lay-out of the gardens is to the design of the architect, all the flower colour-schemes having been designed by Mrs. Maufe.

The general contractors were Thomas Gill and Son, Norwich. The sub-contractors were as follows: S. and E. Collier (tiles); Ames and Hunter (bricks); J. P. White & Co. (panelling); Heal and Son (fitted bedroom furniture); Richard Crittall & Co. (heating); Davis Bennett & Co. (sanitary fittings); Dodds and Stoner (ornamental leadwork); Wainwright and Waring (iron casements); W. Esmond Burton (decorative plaster and stone carving); Bratt, Colbran & Co. (grates); Rusts Vitreous Mosaic Company (mosaic work); Machine Gas, Ltd. (petrol gas); Escaré and Denelle (petrol-gas fittings); Waygood-Otis, Ltd. (luggage lift); Easton, Courtney and Darbishire (water supply, etc.); Daniels Bros., Norwich (nurserymen).

KELLING HALL, NORFOLK: ENTRANCE FRONT EDWARD MAUFE, M.A., F.R.I.B.A., ARCHITECT.

A VIEW OF THE GARDEN FRONT.



KELLING HALL, NORFOLK. EDWARD MAUFE, M.A., F.R.I.B.A., ARCHITECT.

Modern Domestic Architecture. 34.—Kelling Hall, Norfolk: Entrance Front

Edward Maufe, M.A., F.R.I.B.A., Architect

Kelling Hall, Norfolk, was erected in 1913-14 for Sir Henry Deterding, K.B.E. A mansion of very considerable size, it is full of the peculiar charm of English domestic work. The lay-out of the gardens was also to the design of the architect.

Modern Domestic Architecture. 35.—Kelling Hall, Norfolk: Detail of Garden Front

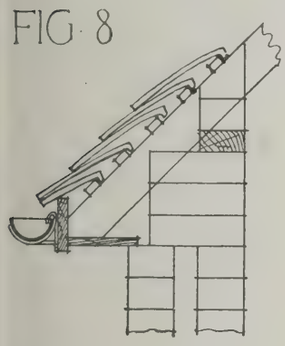
Edward Maufe, M.A., F.R.I.B.A., Architect

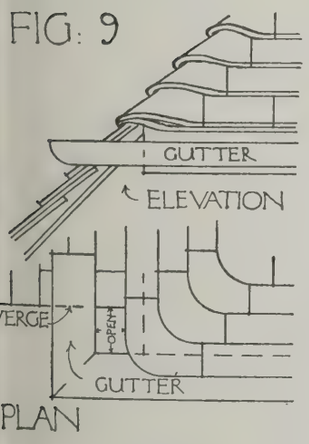
With its fine double bays and terraces set against a foreground of greensward and formal water, the garden front of Kelling Hall makes a delightfully picturesque composition. The materials used for the house are local flint from the estate, knapped and coursed, with small Dutch bricks as dressings and binding courses.

Little Things That Matter. III—Roofs

By EDWIN GUNN, A.R.I.B.A.

ives.—There is so much to be said
ıt the treatment of eaves that it is
l to know where to start. First, as to
form of eaves; generally nothing
s so mean as open eaves, particularly
t 3 in. by 2 in. or 4 in. by 2 in. rafters.
he case of 11 in. cavity-wall construc-
, there is an additional sound reason
:lose eaves—that is, the opportunity
n by this form to build the upper part
ıe wall above the soffit board solid as
vn in Fig. 8. This is invaluable, owing
he stability it gives the outer skin
nst external shock (as when a workman
s a ladder clumsily), and it ensures
that the whole of the roof weight is
borne by the already overworked
r skin. Proportion of eaves projec-
(apart from its protective function) is
nd up with the question of pitch. In
cottage building, which will not
ılly exceed two stories, a tile roof of
legrees to 53 degrees pitch usually
s "fitting" with an eaves, as shown
Fig 8, simply constructed with a 5 in. by 1 in. fascia raised so as to tilt the eaves course of tiling, and a 7 in. soffit board nailed through the fascia and to rafter feet. There is a tendency to overdo eaves tilt on small buildings, which do not usually need sprockets, tilting fillets, and such-like. A close eaves obviates the necessity for boarding under the projection of the roof, and greatly simplifies painting (and repainting!), while the gutter fixing is direct and easy. Guttering should be fixed as low down on the facsia board as it is convenient to go; provided it is true in line (with no dips) an almost nominal fall is sufficient. It is not lack of fall, but leaves and silt which cause gutters to overflow under ordinary conditions, and, in any case, it is impracticable to provide sufficient fall to render the gutters self-cleansing from such accumulations. A gutter fixed low, as shown, will permit a deluge of rain to shoot clear—which is better than catching it and dribbling it over the edge—and it is less liable to damage by





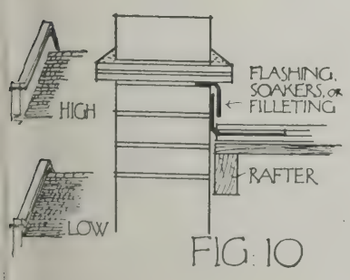


FIG. 10

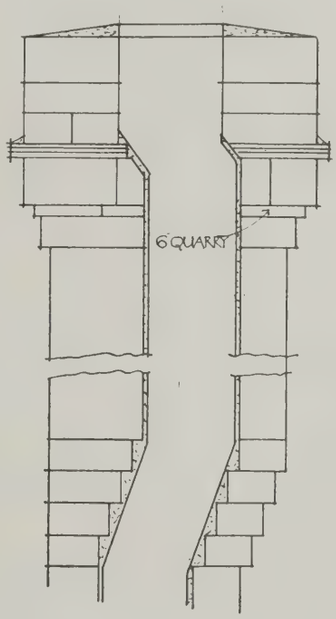


FIG. 11

falling snow. A simple thing which is often done in a very bungling manner is the discharge of water from the eaves of a hipped gable on to the lower roof slopes. One has seen a double returned gutter provided to get round the imaginary difficulty; also gutters with stop ends and nasty little down-pipes twisting on to the lower slopes like dead worms. If the gutter is merely prolonged so that the returns lie (with open ends) above the continued side slopes there is no need for anything more complicated. The water which will run off the hip corner is so little that it is negligible, but if from the situation of the hip it is in such a position that daylight would show through the gap, a 3 lb. lead soaker tucked in between the under eave tiles and resting in the return of gutter will make all tight. This should be fixed after guttering, and need not be nailed. (See Fig. 9.) In the case of a slate roof of from 30 degrees to 40 degrees pitch a greater eaves projection seems natural, and there is stronger reason for an increased eaves tilt, since slates (unlike tiles) have no camber in length, and must be held up at the eaves so that courses above do not "ride." A projection of 12 in. up to 15 in. seems to give character to the simple hipped form of roof, which presents least difficulties in a slated building.

Gables and Verges.—No form of verge is so satisfactory as the old one in which a tile undercloak is formed of plain tile bedded butt-joint on the wall beneath the roof tiling. This should project 3 in. from the wall face, and after laying the roof should be pointed up flush, but *not* plastered over, the edges of the tiles. Gables often suffer from stalkiness due to an ape-like copying of the fire provisions of various building regulations (intended for parapets on party walls, and like cases). The effect of a gable parapet projecting 15 in. above the surface of the roof is much intensified at the apex, and ruins many a gabled front seen in perspective. The practical effect of such a gable moreover is to encourage dampness to soak down into the walls. No parapet which is not subject to fire regulations need stand above the roof surface by more than the amount necessary to allow the coverflashing or filleting to tuck in below the coping, or tile creasing. (See Fig. 10.) While on the subject of gables, how is it that in brick buildings recognition is seldom given to the fact that there is a natural gable pitch, viz., that of racked-back brickwork? This has often struck the writer when looking at gables containing diapered brickwork formed of dark-enders, and it is only necessary to see an old building where the rule is observed to be conscious of its sweet reasonableness.

Ridges.—There is, perhaps, little to be said on this subject except to rub it in that no ridge is so generally pleasing as the "half-round," and that it ought to be made a crime to put red ridges and hips on slate roofs. Buff or blue—or, if red alone is available, judicious use of blacklead or tar. A plea may also be made for the old method of packing up under the half-round ridge of pantiling with bits of broken tile in the channels—botching the considerable void up with mortar or cement looks, and is, most clumsy and unworkmanlike.

Chimneys.—The present tendency is undoubtedly towards the elimination of the chimney. Its absence or reduction gives a curious and unfamiliar look which custom will presumably remove. While chimneys continue to be built, however, do let us make them robust, and not (as many are) sickly and dying. No stack less than 1 ft. 10½ in. on its narrowest face deserves to live, and where it is not possible to obtain this width by grouping flues it is worth while to thicken or corbel out 4½ in. just below the roof to achieve it. This will give a chimney with a 9 in. wall on one (or two) faces, and

4½ in. on the remainder; practical advantage should be taken of this by disposing the extra thickness towards the rainy south-west. The amount of projection of over-sailing chimney caps—as well as of over-sailings generally—is usually much too great. Nothing coarsens scale so effectually as the clumsy 2¼ in. "corbel courses." A projection of ¾ in. is often sufficient (remember that on a chimney cap it is the angular view that counts), and 1⅛ in. is almost the maximum that looks well. The judicious introduction of a course or two of plain tiles, 2 in. paving bricks, or 1 in. quarries, will relieve the monotony of repeated offsets. (See Fig. 11.)

Transmission of Heat and Gases through Walling

An interesting report dealing with experiments on the transmission of heat and gases through, and the condensation of moisture on the surfaces of, wall materials, carried out for the Building Materials Research Committee, which preceded the present Building (Materials and Construction) Research Board. In the summer of 1917 the Housing (Building Construction) Committee appointed by the President of the Local Government Board, with Sir John Tudor Walters as Chairman, approached the Department of Scientific and Industrial Research with a view to the Department undertaking the direction and conduct of a series of researches connected with the employment of new materials and new methods of construction in the very large housing schemes which were than in contemplation by the Government. The matter received the consideration of the Advisory Council, and a Building Materials Research Committee was eventually appointed, constituted as follows: Messrs. Raymond Unwin, F.R.I.B.A. (Chairman); R. J. Allison, C.B.E., F.R.I.B.A.; P. M. Crosthwaite, B.A.I., M.Inst.C.E.; William Fairley, M.Inst.C.E., F.G.S.; G. W. Humphreys, C.B.E., M.Inst.C.E.; Professor E. S. Prior, A.R.A., F.R.I.B.A.; and Mr. B. Seebohm Rowntree, J.P. The terms of reference to the committee were: "To make arrangements for carrying out research on building construction instituted by the Department at the instance of the Local Government Board Committee, to be responsible under the Council for the direction of such researches, and to deal with such other matters as may be referred to them from time to time by the Council."

The committee state that the degree of physical comfort experienced in an ordinary dwelling house depends to a great extent upon the thickness and construction of the outer walls. In dwellings of Devonshire cob or similar construction the comparative weakness of the materials composing the walls in resisting compressive stresses renders it necessary for the walls to be much thicker than is ordinarily the case in brick houses. As a result dwellings of this type are noted as being cool in summer and warm in winter. Other methods, of which the use of the ordinary unventilated cavity wall is one, are sometimes adopted with a view to obtaining a warm dwelling.

Tests of the heat loss through various types of thick walls have been made from time to time; of these special attention may be directed to the work carried out by Mr. A. H. Barker (Wh.S., B.A., B.Sc.), of University College, Prof. W. M. Thornton, D.Sc., D.Eng., of Armstrong College and at the National Physical Laboratory. A considerable amount of work on this subject has also been done abroad, particularly in America and in Germany. The committee thought, however, that further tests were desirable in reference to thin walls and walls of new types of construction. They therefore decided to ask Mr. Barker to undertake for them a research into the heat transmission through some seven different types of wall.

Tests on the porosity of various materials were carried out for the committee at the National Physical Laboratory. The tests roughly consisted in drawing or forcing air, hydrogen, coal gas, or carbon dioxide through slabs of the selected material. The pressure on either side of the slab was measured by means of manometers, the amount of gas forced through in a given time being determined by passing the gas through a meter. Pressure differences ranging from 16.7 lb. per square foot to 100 lb. per square foot were employed. The rate of flow through any given slab was found roughly to depend upon the coefficient of viscosity of the gas, and varied in proportion to the pressure up to 80 lb. per square foot. In some cases specimens from different sources were tested in order to determine the degree of uniformity which could be expected due to variations in material and methods of construction.

The following materials were used: Fletton brick, stock brick, concrete (ordinary mixing), concrete (dry mixed and rammed), coke breeze, and coke breeze (rendered).

Some preliminary experiments were made with plaster applied to coke breeze blocks, but unsatisfactory results were obtained owing to the low porosity of the breeze foundation. For the main tests the plasters were applied to an expanded metal foundation. The slabs were finished on one surface so that one-half the area of one surface was smooth, the remainder half being left rough. The back of the slab was also left in the rough state.

The investigation into the condensation of moisture on various surfaces proved extremely difficult to carry out, and the results were not definite. The main fact brought out was that the nature of the surface rather than the material was of importance. The smooth surfaces showed far more condensation than the rough, as was to be expected.

The Building (Materials and Construction) Research Board is constituted as follows: The Most Hon. The Marquess of Salisbury, K.G., G.C.V.O., Chairman; Mr. R. J. Allison, C.B.E., F.R.I.B.A.; Major-General Sir Gerard Heath, K.C.M.G., C.B., D.S.O.; Mr. G. W. Humphreys, C.B.E., M.Inst.C.E.; Mr. S. B. Russell, F.R.I.B.A.; Sir Aston Webb, K.C.V.O., C.B., P.R.A.; Mr. H. O. Weller, B.Sc., M.Inst.C.E., Director of Building Research; Major E. O. Henrici, late R.E., Assoc.Inst.C.E., Secretary.

Copies of the report can be purchased, price 1s. net, through any bookseller or directly from H.M. Stationery Office, at the following addresses: Imperial House, Kingsway, London, W.C.2, and 28 Abingdon Street, London, S.W.1; 37 P[illegible] Street, Manchester; 1 St. Andre[illegible] Crescent, Cardiff; 23 Forth Street, E[illegible] burgh; or from Eason and Son, L[illegible] 40-41 Lower Sackville Street, Dublin.

National Federation Annual Meeting

The annual general meeting of [illegible] National Federation of Building Tra[illegible] Employers of Great Britain and Irel[illegible] will be held in the Connaught Roo[illegible] Great Queen Street, London, W.C.2, [illegible] 10.30 a.m. to-day. Consideration [illegible] be given to any recommendations fr[illegible] the Council on the following matters:

As to proposal from the Administrat[illegible] Committee to alter Federation Rule[illegible] (*d*), 3 (*e*), and 4 (*a*):—

To amend Sub-section (*d*) of Rul[illegible] as follows: In third line delete the fig[illegible] 75 and substitute 150; in the fourth [illegible] delete "or portion of £75 exceeding £4"

Also to amend Sub-section (*e*) of Ru[illegible] as follows: In second line delete [illegible] words "and members"; in third [illegible] insert an "s" at the end of the wo[illegible] "Federation" and delete the wo[illegible] "Executive Boards."

Also to amend Sub-section (*a*) of Ru[illegible] as follows: Delete the last three lines [illegible] the Rule 4 (*a*) and substitute the foll[illegible] ing: "The total number of elected m[illegible] bers of the Council shall be 75. [illegible] number of representatives for each [illegible] gional Federation to be ascertained [illegible] dividing 75 into the total subscripti[illegible] due from all Regional Federations [illegible] the previous year, the quotient divi[illegible] into the total amount of subscription [illegible] from each Regional Federation for [illegible] previous year fixing the number of [illegible] presentatives to which each Regio[illegible] Federation is entitled, fractions be[illegible] ignored, with a minimum of three rep[illegible] sentatives from each Regional Fede[illegible] tion."

As to the following proposal by Lon[illegible] Federation to alter Federation Rules [illegible] Standing Orders:—

Rule 3.—"That the total number[illegible] Members entitled to vote at Gen[illegible] Meetings shall be 300, 75 of whom sh[illegible] be Members of the Executive Coun[illegible] and the remaining 225 shall be elec[illegible] upon the same basis as that proposed [illegible] the election of Members upon the Exe[illegible] tive Council."

Rule 21.—"That 'General' should [illegible] inserted after 'yearly' in second li[illegible] and 'entitled to vote' after 'pres[illegible] in third line."

Standing Orders.—2. Mode of Voti[illegible] "That this paragraph be amended so [illegible] to provide 'that each Member wh[illegible] entitled to vote at a General Meeting sh[illegible] be furnished with a ballot paper [illegible] forated into sections with a number [illegible] each. All propositions to be numbe[illegible] and the corresponding section of h[illegible] ballot paper to be used in voting there[illegible]

Other business will include the pre[illegible] situation of the 44-hours question; n[illegible] nouncement of elections by Federat[illegible] for New Executive Council; the recep[illegible] of nominations to the National Dema[illegible] tion Committee for the ensuing year, [illegible] make an election; recommendation o[illegible] Executive Council for Election of Pst[illegible] dent and Officers, and Election of Pst[illegible] dent and Officers.

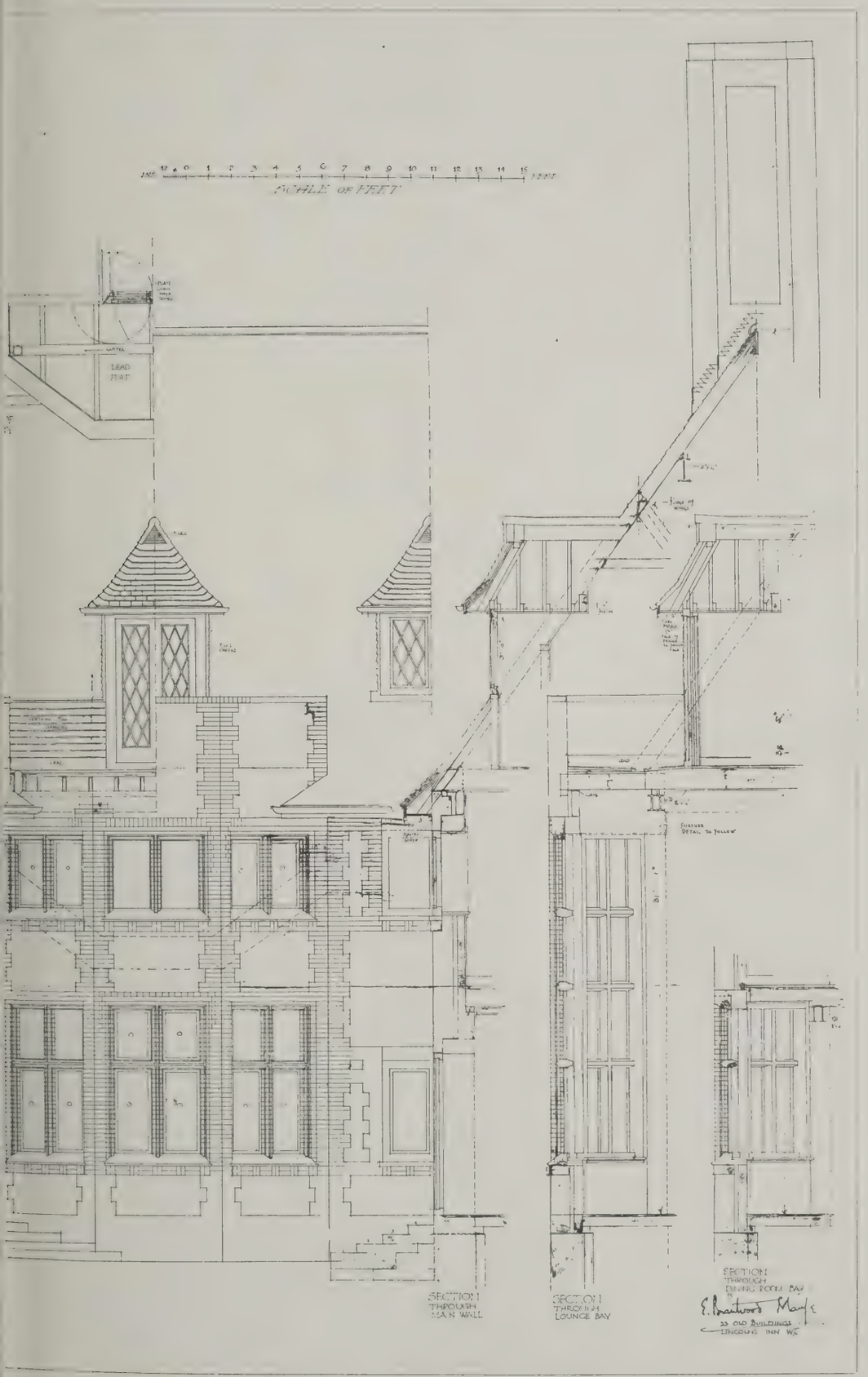
Architects' Working Drawings. 49.—K

Edward Maufe,

Kelling Hall was erected during the years 1913–14 for Sir Henry Deterding, K.B.E. The materials used
courses. Furth

l, Norfolk : Detail of Terrace Front

B.A, Architect



ne estate, knapped and coursed, with small Dutch bricks (7 in. by 3½ in. by 2 in.) as dressings and binding

en on page 163.

chings by Architects

ability to draw is as important to hitect as to the painter, implying loes, besides the mere power of g specific marks on paper, that veness to form and power of acute cal observation which is the hall- of the artist. Theoretically every ct is able to draw; nevertheless, in g at a drawing by an architect one vs inclined to excuse any frailties ution by saying: "Oh, that is very ndeed—for an architect." This is ous, needless to say, since the only for whom allowances can be made amateur, and to make allowances architect is as good as calling him iteur to his face, which is considered lt in the best circles.

n looking at the etchings on exhibi- the Architectural Association, one t to judge them by ordinary ex- n standards, not as though they he work of amateurs or infants. st is a little too strong for most of for as a whole the technique is not l criticism, and there is a good deal biting and bad printing, and often is applied too thick. Neverthe- is an interesting show, not in the omprehensive, or even representa- ut rather the "effort of a few gay whose distinction lies in their ty.

ther distinction possessed by cer- f the exhibitors lies in an extra- y ability to turn out at one it atrocious, at the next delightful Palmer Jones is one such culprit. of his etchings do not bear study yet with perfect nonchalance he sticks up amongst them his little "Medinet Habu," a most attractive piece of work—delicate, sincere, and quite unpretentious. His temple of Zeus Athene is not nearly so effective. It appears artificial, as though the composition had been taken out of a book; but in his "Cannon Street Bridge," which we reproduce, he again scores a boundary with a nice easy stroke that makes one admire his unaffected style. Quite near this etching hangs a study of Waterloo Steps, which is again attractive because it is a failure and might have been a success. It is a failure according to the rules, because all the lines appear to be drunk, and stagger in an astonishing way. The bottom left-hand corner, too, is horribly blotchy, muddled, and black, making altogether too much contrast with the light surfaces in close proximity; but the formal composition is quite excellent. The long horizontal lines and rectangular blocks, and the broad square sky-space above, fit as it were into a corner of one's mind, while the artist's obvious struggle to realize a quite definite conception succeeds in capturing one's sympathy, though it does not attain its object.

Quite as architectural in feeling is Lancelot Goldie's etching of great trees drooping over a road down which pass cattle with their keeper. Luckily the cattle are obscured in an immense shadow (what there is to be discovered of them is not convincing); but the trees, which form the interest of the etching, are powerfully and imaginatively rendered in that rather dramatic manner which characterizes the artist's work. Passing on, one comes to the collection of Alick G. Horsnell's etchings. These possess a joyous holiday spirit which makes one regret that their author did not survive to develop his delightful vein. He relies for his effects chiefly on broad white spaces and long shadows, on broad effects of light and form; though on occasion he can be delicate, as the little etching at the left of the lower row displays. His most immediately effective work is that of the lake in Bushey Park, with an avenue of trees reflected in the water each side of a monument. Because this appears effective at first sight one is inclined to fight shy of it, but it is really quite a jolly subject sympathetically handled, though the monument—the one bit of architecture in the etching—is very feeble indeed. In a good deal of Horsnell's work there is a certain looseness in construction. He does not always feel the weight of a roof on a wall, or the weight of a wall on its base. This does not apply, however, to the etching reproduced as the frontispiece, which in draughtsmanship, assurance, and forcefulness is easily superior to his other exhibits, even if it does not possess quite the same spontaneous charm. Though the print is a little dirty, it does not hide the powerful drawing of the tower in the background, the strength of which is relieved in just the right way by the cottages beneath it. You can see that the artist enjoyed drawing this tower. His sense of the picturesque is stirred, and he expresses his relish in his very careful observation of its construction. The white surfaces of the cottage also seem to have attracted him. He allows no melodramatic contrasts, however.

Of the other etchings exhibited there are interesting things by Frank Green,

CANNON STREET RAILWAY BRIDGE. BY PALMER JONES.
(From the Exhibition at the Architectural Association.)

Percy F. Westwood, Arthur Welford, Walter Keesey, Sir Ernest George, Christopher Shiner, and William Aussell, who has a jolly little etching stuck away in a corner. There are cathedrals looming above market towns, and many foreign studies which show observation. On the whole the exhibition is entertaining, and the atmosphere of sincerity is decidedly attractive. There is only one thing lacking: There is nobody with any conviction.

H. DE C.

A Unique Exhibition

There is on view at Messrs. Maclean's Gallery, just below the Haymarket Theatre, an exhibition of architectural drawings by Professor S. Noakowski, which every architect and every student of architecture should make a very special point of going to see. This exhibition is quite unique. Please do not miss it.

Book Reviews

Old Inns.

Those who think only of Mr. Cecil Aldin as the producer of sporting prints, as the delineator of hunting scenes vividly alive with huntsmen, horses, and hounds, will be agreeably surprised to find that his art is of a much wider scope than might thereby be inferred. In his book, "Old Inns," which is written as well as illustrated by himself, he reveals a rare gift for architectural work. Here he has perpetuated in the form of delightful colour and pencil sketches some fifty old inns in various parts of the country—a mere handful, it is true, of those that still exist, but a handful for which Mr. Aldin deserves our best thanks.

Far too many of our old inns have disappeared. Of all those famous mediæval and other taverns that, even up to the time of Dickens, enriched the neighbourhood of Southwark and the Borough—the Tabard, George, White Hart, King's Head, Bell, Swan with Two Necks, and the rest—only a fragment of one, the George, is in existence to-day. All the others have disappeared with the onset of "progress."

In country towns much the same sort of thing has happened. Many of those that have escaped total demolition have suffered "restoration" and "remodelling" to such an extent that little of the original work remains. Others have been sadly mutilated by the removal of features of interest; for example, the Reindeer, at Banbury, from which, as Mr. Aldin reminds us, a complete room was, some time ago, transported to the U.S.A. Year by year these delightful old inns are becoming fewer and fewer, while many are falling into irreparable decay. Here, surely, is scope for the activities of the Society for the Protection of Ancient Buildings.

Mr. Aldin tells us that his book was inspired by "Patterson's Roads," and he makes several references to that quaint old record of routes, residents, mansions, and posting inns, without which no old-time traveller would make the venture of a journey through the country. Many of the inns that Patterson mentions Mr. Aldin has visited, and in his book he gives sketches and descriptions of them. Some are famous, like the George, Salisbury; the Mitre, Oxford; or the Mermaid, Rye; while others are comparatively unfamiliar, like the Bear's Head, Brereton, or the King's Head, Ombersley. All are delightful in their homely simplicity. There is perhaps an undue prevalence throughout the book of casement windows and half-timbered gables. Very few examples are shown outside the Tudor period, which is a pity, for some of the most architecturally attractive of our country hostels were built during the late Georgian era. Perhaps Mr. Aldin will fill up the gaps in another book.

No attempt is made at an historical account of the tavern, Mr. Aldin's notes being desultory and here and there a little inconsequential. He should get Mr. Chesterton or Mr. Belloc to collaborate with him in his next book.

"Old Inns." By Cecil Aldin. Heinemann, London, 1921. 25s. net.

Painting Troubles.

Of all the building trades there is none subject to so much abuse or that is so little understood as painting. While even the architect is apt to expect too much from the craft, there are many people who imagine still that almost anyone, no matter how unsuitable, is fit "to wield the brush." Yet the trade is one of the most skilled, and almost every job, from beginning to end, presents, perhaps, more difficulties than are encountered in any other branch of the industry. Every job is a problem, and trouble may arise from different causes, although the result may be the same. In "Painting Troubles and Their Remedy" Mr. Andrew Millar places at the disposal of the painter an experience of forty years in the trade, during the last twenty of which he has acted as practical expert to manufacturing paint and varnish houses. He has also worked at the trade in the U.S.A., and noted the methods of work there, while during his wanderings in Portugal, France, Belgium, Germany, Denmark, and Sweden he has haunted many painting jobs in progress and examined the effects they produced. It is from this experience that the author has produced a book which should be the constant companion of every one connected with industry. All the information is given in a clear and practical manner, without the use of chemical formulæ or equations.

"Painting Troubles and Their Remedy." By Andrew Millar. Price 4s. net. The Trade Papers Publishing Co., Ltd., 326 Bank Chambers, 329 High Holborn, W.C.

The A. A. of Ireland

Mr. Harold G. Leask, M.R.I.A.I., has delivered an interesting lecture on "An English Holiday" before the Architectural Association of Ireland. There was a large attendance of members. Mr. Leask showed many lantern views of places of interest in the West and Midlands of England which he visited during a holiday last year. The lecture programme drawn up for the ensuing session includes: "The Land of Nubia," by Mr. L. E. Steele, M.A. (February 21); "Impressions of Holland," by Mr. L. F. Giron, M.R.I.A.I. (March 7); "The Architect and the Nation," by Mr. Darrell Figgis (March 28); "America," by Mr. Robert Atkinson, F.R.I.B.A. (April 11); and the President's Valedictory Address (April 28).

Birmingham Architect[ural] Association

Mr. Paul Waterhouse, P.R.I.B.A. a guest at a dinner held by the Bir[m]ham Architectural Association. guests included the Lord Mayor o[f] mingham, Alderman David Davis, the presidents of several architec societies.

After dinner, Mr. Waterhouse deli an address which he commenced w very hearty acknowledgment of th ception which had been offered to He was anxious, he said, to expres warmest appreciation, not only o personal friendship shown in the ir tion to be present, a friendship whi his side was as sincere as that show his hosts, but also of the token whic invitation and reception showed o very admirable bonds of unity connected the R.I.B.A. with its societies. Perhaps there never w time in the history of professional o ization in which the uniting links so strong and so free from anythin brotherly and mutual harmony. any special evidence, he said, to be s of the strength of this spirit of co-o tion it could be found undoubtedly i way in which the non-metropolitan ties had worked together with the c body in elaborating and encouragin scheme of unification now before After dealing with this topic the pres spoke of the nature of the considera which make association under a m politan centre so necessary, and expl how little such a centralization derogatory to those who while not li at the metropolitan base were for all as important—being outposts of republic—as the administrative quarters.

He urged the necessity for vit in the non-metropolitan groups, po out how essential such vitality was t mother society, and urged them to be afraid of coming forward with gestions, schemes, or offers of colla tion.

Passing to the topic of educatio insisted on the great value of the pr education schemes, not only to the y men who were the immediate be ciaries of the schooling, but also t architectural community at large, a ing as it did the welfare of futurity, the posterity of the architectural t tions. He went further and pointe that the very interest taken by e lished practising architects in this vision for the younger generation w itself a fascinating link of union a the architects of the day. Few pr sional bodies were ahead of architec this enthusiastic promotion—some at great personal sacrifice—of the being of those young men who we be their successors and supplan After dealing briefly with the alarm by some pessimists as to the po overcrowding of the profession, Waterhouse concluded his speech serious word or two on the motto o Institute and the great aims which profession had before it.

The meeting concluded with a h vote of thanks to the President o Institute, proposed by Mr. H. T. E land, F.R.I.B.A.

A Birthday Party for Professor Lethaby

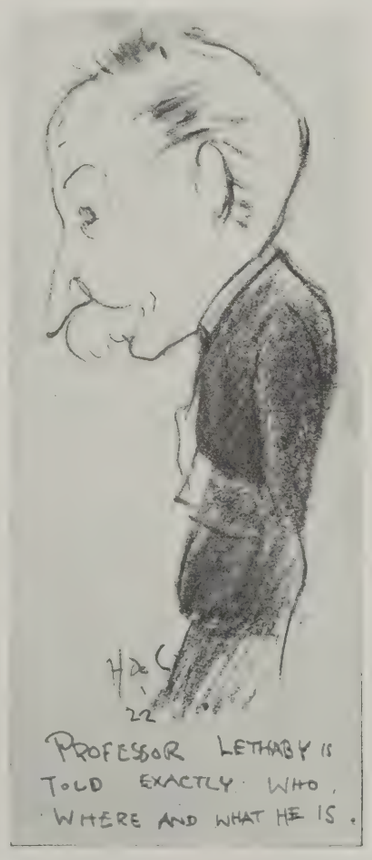
AST Thursday, in a room in Queen's Square, some birthday celebrations took place. The room was quite —about an acre square—but the day Cake took up nearly a quarter e space available, so that the few ts who arrived naturally found them- s rather cramped for room. However, were quite happy so long as they got nd those who couldn't find any room e floor stood on the backs of chairs, or n the picture-rail with fixed smiles had to be fixed somehow). When ybody was settled, Lord Crawford duced Professor W. R. Lethaby st cheers as the victim or culprit nsible for the Party, and Mr. Mackail, late ssor of poetry at Oxford, read to an address (written by himself, and d by the culprit's friends), which as follows :—

TO WILLIAM RICHARD LETHABY

e names signed below are those of ds whom you have made and kept ng your life. Among us are col- ies and pupils to whom your work your teaching have been an inspira- which they take pride in acknow- ng; among us, too, are those who, not themselves executants or pro- d students of the applied arts, are lly conscious of and equally grateful he example you have set of a life ted to high aims, for your services interpreter of the past, and for what have done to awaken the love of beauty, and to make the arts of h you have been the follower and nent a power and a joy in human All of us alike desire to express our eciation of your work, our regard for character, our obligations to your ngs and lectures, and our gratitude he ideal which, by precept and ex- e, you have constantly held up e us as students, as craftsmen, and tizens.

r nearly half a century you have, as olar and craftsman, and as a teacher expounder of the mistress-art of tecture and its ancillary arts of n, exercised a quickening influence the theory and practice of those as comrades and pupils, have ac- panied or followed you on the same . Our debt to you demands the nition which we are desirous to and which we trust that you will atified to receive. As a student you already an accomplished draughts- and gave the first proofs of that of style and faculty of design for h all your work has been conspicu- As assistant to Norman Shaw you ne attached to a great school, for nan Shaw himself had succeeded p Webb and William Morris in ge Edmund Street's office, and your , as well as your aims and ideals, became linked with theirs. With Webb and Morris the closeness of association and the intimacy of your lship remained unbroken as long as lived. As a designer of buildings of their accessories, and as one who t and practised the right applica- of materials, you carried on the ment which these great artists initiated. But your main sphere has been in the fields of teaching and research, of organizing and interpreting, and of the application of the arts to civic and social improvement. In the eighteen years during which you were Professor of Design at the Royal College of Art, hundreds of students passed through your hands. Some of them have attained eminence; all would acknowledge their debt to a teacher who combined enthusiasm with good sense, devotion to ideals with fine scholarship, and wide historical knowledge with high executive ability. As one of the founders and directors of the Central School of Arts and Crafts, as an original member and past master of the Art Workers' Guild, as one of the group who organized the exhibitions of the Arts and Crafts Exhibition Society, and in many other ways, you did valuable service both in training art workers and teachers, and in fostering a wider public appreciation of sound, sincere, and vital art. You are known and honoured as an interpreter of ancient Greece and of Byzantium, and, not less, as was fitly recognized by your appointment as Surveyor of Works for Westminster Abbey in 1906, of that great mediæval art which is one of the chief glories of our own country. For to you art has always been a single continuous expression of the highest human thought, and your energies have been devoted, not only to preservation and appreciation of the work of past ages, but to bringing art into living contact with the life of the present day.

To these words of grateful record we desire to add our best wishes for the years which may still lie before you, and we ask you to accept our assurance that your influence lives, and that your work has not been in vain.



To this Professor Lethaby replied: Your kindness makes me feel very guilty, as though I had committed a crime which you had not detected. I feel certain you have made a mistake somewhere; my only hope is that it will not be discovered. When I first heard of the idea of this Birthday Party I felt that I had better run away before you found me out; and if at the last moment I had received the message in the story-book, "All is discovered. Fly!" I think I should have run.

My masters, he went on, were Ruskin, Norman Shaw, and Morris. Norman Shaw, whose office I entered at the age of twenty-two, was a remarkable man, a delightful man. During the whole twelve years I was in his office I never once saw him irritated. There work was really one long lark, and there I met for the first time Horsley, Macartney, and Newton. Later, through Ernest Gimson, who introduced me to the Society for the Protection of Ancient Buildings, I met Morris and Webb, from whom I learnt that what I meant by architecture was "Buildings honest and human with hearts in them." Webb was one of those men who are so great that nobody ever hears of them. I remember once saying to him, of some incident that had occurred, "at least you acted like an honest man." "Oh," he replied, "not quite that."

This is my sixty-fifth birthday. I am growing old. If asked I should put my experience of life thus :—

1. Life is best thought of as Service.
2. Service is productive work.
3. The best way to think of labour is to think of labour as Art. (This was the great discovery of Morris and Ruskin.)
4. Art is best thought of as sound ordinary work.
5. Culture should not be thought of as the knowledge of books, etc., but as a pleasant human spirit.

The root mistake of a hundred years' development lies in thinking that culture implies book-learning or book-wisdom. We imagine that a cultivated man is a man who has read widely, whereas, in fact, books are only one means of attaining culture. We can just as easily become cultured by cultivating the land, or studying building or carpentry, or sailing ships. In conclusion I thank you all, my kind friends, for the honour you have shown me.

After this the address given by Mr. Mackail was presented by Lord Crawford to Professor Lethaby, while the professor's portrait, done by Professor Rothenstein especially for the occasion, was presented to Mrs. Lethaby. Finally, Lord Crawford wound up the proceedings by a short speech, a portion of which the Editors of this Journal would like to adopt as an expression of their own sentiments : they "admire the distinction of Professor Lethaby's mind, the modesty of his character, and the growing influence of his achievements," and would join with his other friends in wishing him and Mrs. Lethaby the most prosperous of voyages.

Northern Polytechnic Institute Speech Night

There was a large attendance of representatives of architecture, surveying, and building, and of students and their friends, at the annual speech night of the Department of Architecture, Surveying, and Building of the Northern Polytechnic Institute. The chair was occupied by Mr. R. L. Roberts, M.A., a member of the governing body of the school, and himself a master builder, supported by Mr. H. B. Phillpot, also of the governing body, Mr. Rushworth, F.S.I. (representing the Surveyors' Institute), Sir William Wells, F.S.I. (Auctioneers' and Estate Agents' Institute), Messrs. F. R. Yerbury (Architectural Association), Gardner (Concrete Institute), F. J. Gayer (London Master Builders' Association), Major Shingleton (Institute of Builders), and Messrs. W. Stewart Greene (Institute of British Decorators), A. Andrews (London Master Decorators), L. W. Winters (London Master Monumental Masons), C. E. Robinson (London Master Plumbers), Batchelor (London Apprenticeship Committee), J. Murrey (National Federation of Building Trade Operatives), A. Stranks (Amalgamated Union of Building Trade Workers), and R. F. Gilling (National Association of Operative Plasterers).

Mr. W. G. Newton, M.C., M.A., A.R.I.B.A., speaking upon "Architecture and the Arts of Design," referred to the need of the true artist for self-expression and the great interest of all work that bears this evidence of human personality.

Mr. E. C. Hannen, M.A., director of Messrs. Holland and Hannen and Cubitts, in the course of an interesting speech on "Construction" referred to the vacant places at the top of the ladder of fame and the demand that will always exist for the highly skilled worker.

Mr. Hugh Davies, of the Board of Education, dealt in a very able manner with craftsmanship, and touched upon some of the difficulties that still exist between the masters and men and the efforts of the apprenticeship schemes to revive highly skilled craftwork.

The prizes gained during the year were then distributed.

Every section contained examples of excellent work; the architecture was unquestionably an advance upon anything previously shown, special attention having been given to working drawings, of which there were some very good examples. The stage design was most attractive; valuation and quantity surveying maintained an equally high level. The land survey was marked by care and accuracy, and there could hardly be more finished workmanship than that of the plumbing section. There was an excellent display in joinery, including a fine piece of craftwork in oak that gained the Richard Roberts prize and the Honours City and Guilds in Carpentry. Decorating in all its branches fully maintained the excellent standard it has set, and was notable for the successes gained by its students at the National Competition recently held in Manchester.

After the presentation of the prizes a vote of thanks to the speakers was proposed by Dr. Reg. S. Clay, B.A., D.Sc., the principal. Mr. T. P. Bennett, head of the department, in seconding the vote of thanks, referred to the aim of the school in creating and maintaining close touch with all the professional and trade societies connected with the work, his keen desire to see these societies in active co-operation, and the possibility that out of this would grow a joint council who, meeting on common ground, would solve some of the larger problems of the building industry and of architecture. He touched also upon the apprenticeship scheme, the junior technical institutes, the necessary co-ordination of architecture to building, and the advantage to all students of the existence in the same school of architectural, surveying, and building sections.

Other speakers included Mr. Rushworth, Sir William Wells, Mr. Stewart Greene, Mr. F. J. Gayer, and Mr. Murrey, all of whom referred to the excellent work of the school and the progress it had made during the last twelve months. They expressed their keen desire to co-operate actively in technical education, and their interest in the work they had seen in the hall.

The chairman endorsed all that had been said, and added his own admiration for the work of the department and its efforts.

Brazilian Centenary Exhibition

The Prefect of Rio de Janeiro has laid the foundation stone of the pavilion which is being built for the accommodation of British exhibits at the forthcoming Brazilian Centenary Exhibition to be held from September 7 to December 31 next. The exhibition, which will be universal and international, is being organized by the Brazilian Government in connection with the celebration of the Centenary of Brazilian Independence. Invitations to participate have been accepted by most of the leading powers, and our chief competitors in the Brazilian market are making great efforts to further their interests by taking full advantage of the opportunity which the exhibition offers for trade propaganda and advertisement. The United States of America have voted a million dollars for official participation, while the Belgian Government, in addition to a national pavilion, intend to build an exhibition hall with an area of 70,000 square feet, and there is every indication that other countries intend to be very strongly represented.

In view of the activities of other countries it is essential that the British section should be thoroughly representative. The British section has received not only the moral support of Anglo-Brazilian commercial interests, but also substantial financial assistance. A committee, of which Mr. Lionel de Rothschild is chairman, was formed to co-operate with the Department of Overseas Trade, and has collected funds which will defray nearly half of the cost of this country's participation. Full particulars regarding rates for space, etc., etc., can be obtained from the Department of Overseas Trade, 35 Old Queen Street, S.W.1.

The Marriage of Art with Industry

During the past week an event occ in London which is probably of w wide significance. It was not her by fanfares or by reports of canno Press; nevertheless it was of the greatest importance, and architects be wise to give it some attention. was the opening on Monday, Januar of an Exhibition of Present Day In trial Art, in the North Court of the toria and Albert Museum, by Mr. He Lewis, Parliamentary Secretary to Board of Education. The exhib was inaugurated by the governors director of the British Institute of In trial Art, which came into existence a two years ago and has already held exhibitions in the provinces—one Huddersfield, another at Cambridge was founded under the auspices of Board of Trade and the Board of Ed tion—a parentage of the happiest au for the child—and its object is the no one of modern times: to unite " with "Commerce," or, as Mr. Lewis it, to marry Beauty with Mass Pro tion. The English, said Mr. Lewis, in opening address, imagine that ar quality can only be obtained at a price. Purchasers who wish to cheaply are content to receive meann shoddy work because they imagine what is cheap must therefore be n This, it is needless to say, is the miserable mistake. An article ca beautiful for twopence or for a hun pounds. It is not beauty that money, but pretentiousness. The of affairs in which people can believe a thing as that beauty costs money mean and miserable state of affair has not always existed in Englan fact, it is a peculiarly modern idea— by every endeavour we who know b must get those who are ignorant in saner, a more healthy state of mind. A that is wanted is change of values—a principle operating in supply and dem When it is realized that artistic qu is itself a commercial asset, compet in the creation of beautiful things w the natural result. To this end muc be done through the agency of the Sc of Art.

To-day we are content to pro slavish copies of old designs, imagi the imitation of beautiful things t the production of beautiful things indeed imitation of the best is no stitute for creation. It is right fo modern designer to draw upon th spiration of the past, but he mu express his inspiration that it meet demands of modern requirements.

This collection of the productio modern industry is therefore of th most interest and importance. He it is in the Victoria and Albert Mus one may compare the achievements past with the achievements of the pr —achievements in all spheres of indu for nothing is so trivial as not to de the highest quality in design and e tion.

It has been determined to ke permanent collection at the Vic and Albert Museum, to aid the compi of which manufacturers and prod are invited to make gifts of their wa

ociety of Architects Annual Report

reat deal of information with regard various activities of the Society of tects is given in the last annual of the Council which has just come nd. Progress is reported in every tment, and there are great possi- s of further developments in the

Examination Committee has re- l and accepted with great regret the ation of the chairman, Professor Adams, who had held that position enty years, and who, owing to age creasing physical disabilities, is no able to undertake the duties. The ittee desire to place on record their ciation of his long and valuable es as Chairman of the Committee, s an Honorary Examiner, and their of the loss which his retirement ffice will entail upon this branch of ciety's work.

Society Membership Examination ne has been remodelled in view of e-organization of the membership tions, and a system has been de- and adopted which combines a cal and theoretical examination the addition of an oral test. The nation is conducted on lines which candidates to work the questions ıy centre, as though they were ms arising in the ordinary course eir practice. Prizes of the total of £175 during the year, in addition dals and certificates, were offered certain conditions. These ex- tions were held during April and er, 1921, when thirty candidates eted the papers, of which number tisfied the examiners. Three can- s gained certificates of merit, and ertificates of honour, one of whom in addition, awarded a prize of y-five guineas as the best candidate e year. The examiners' reports te that almost without exception andard exhibited by the candidates d answers is a low one, and that in n subjects, notably the thesis, too reliance is placed upon text books. dates who have been relegated in are recommended to take a course truction before sitting again, and a is to be prepared on the examina- enerally for the guidance of future dates and as an indication of the ard of proficiency expected. With ception of the Victory Scholarship etition, there were comparatively ıtries for the other prizes offered by ociety, and the merit of the work tted was not sufficient in some to justify the Assessors in making ll award. All the Society Compe- s are assessed on the jury system.

h regard to membership it is stated o Fellows, 95 Members, 75 Licen- , and 42 Students have been added e respective Registers, and that embers and 21 Students were re- l from the Registers under Article 57. allowing for deaths, resignations, ther cessors of membership, and for ers, the following is the strength of ciety on October 31, 1921 :—

	1921	1920
vs	180	93
ers	1,125	1,146
Honorary Members ..	24	24
Retired Members ..	37	39
Licentiates	111	37
Students	110	102
	1,587	1,441

The Committee have frequently given advice to members on points of professional practice relating to housing fees, contracts, building by-laws, wages, specialists' fees, arbitrations, certificates, custody of documents, etc., etc. Some thirty cases have been considered and dealt with during the Session by the Committee, who have reason to believe that the assistance thus given to members has been of considerable help to them.

The Society's Regulations for professional conduct and etiquette have been revised and strengthened in certain directions, particularly in regard to architectural competitions, and the inclusion of a clause of the Councils' views that the calling of an auctioneer or house agent should not be carried on or conducted by an architect.

The Society's representatives on the Unification Committee have taken an active part in the proceedings, which have resulted so far in the establishment of the principle of a scheme for the admission of all qualified architects into the R.I.B.A., and the formation of a sub-committee which is discussing with the Society the details relating to membership.

Last March Monsieur Chaures accepted the position of Patron of the Atelier, and shortly afterwards, when the office of Chairman of the Beaux Arts Committee became vacant, Mr. J. W. Simpson, P.P.R.I.B.A., was good enough to show his confidence in this work by becoming Chairman and taking an active interest in its educational policy. Under these favourable auspices the Atelier has made steady progress, and during the eight months under review, of which nearly one-half covered the summer months, the internal working of the Atelier has been reorganized, and the nucleus of half-a-dozen students increased to twenty, and there is every indication that the Atelier will be working at full capacity in the near future. This Atelier is one of a group of Royal Academy Ateliers in London, each retaining its autonomy, but having its conditions of entry, system of education, and scale of fees standarized.

During the year an Indian branch of the Society has been established with headquarters in Bombay, and all the necessary formalities have been completed for its organization. Mr. G. H. Wenyon, a member of the Home Council, who was in India on professional business, took an active part in the promotion and formation of the Branch, whose first general meeting was due to be held in October, 1921.

As the Institute of Builders and the National Federation of Building Trades Employers decided to withdraw their representation, the Council of the Board considered that no useful purpose would be served by the continued existence of the Board without representatives of the employers, and intimation of this was sent to the Society, as one of the constituent bodies, together with an expression of appreciation of the services given by the Society's representatives.

A Layman's View of Architecture

Mr. Samuel Smethurst, J.P., in reading a paper on "A Layman's View of Architecture" before the Manchester Society of Architects, said that the man who had become a student of styles in architecture made criticisms in regard to details which ordinary men scarcely ever noticed, but a fine proportioned building, nicely grouped, in harmony with the character of its surroundings, never failed to make its appeal, and such buildings, although inanimate things, were always influencing for good those in contact with them.

An ideal firm of architects would be one which had principals skilled in various sides of the profession. One should make the plan, be strong on construction, have a good commercial grasp of building, and then his colleague, who can give form and life to the structure, should begin to play his part. To get all he wants it might be necessary to sacrifice some little of the utility. That, however, would always be done under the consciousness of the price that was being paid and a full knowledge of what was got for the sacrifice.

Proceeding, he said : I sometimes think, if I was a client and had an important building to build, I would engage two architects, one a commercial utilitarian man—who could give me the best plan and construction and a business sense on the execution of the work—and the other should be a man who could ensure a fitness in the design and the beauty. I do not think this would add to the cost materially, if at all, on the principle that it costs little to buy a few tubes of paint and brushes, a pallet, and canvas, yet the product may be a picture of great value. And so that something which is indefinable, but is in the soul of a man, may arrange for the use of crude bricks, stone, timber, and other raw material of a building to be placed in such a way (yet at no more cost) that the resultant is a thing of beauty and an enduring monument for good through the ages.

There is little doubt that during the last twenty or thirty years there has been a great advance, hence I think it is true that London is fast becoming, if it had not already become, the finest capital in Europe. We sometimes hear of proposals for placing architects, like doctors and lawyers, under some kind of legal sanction and registration. The cases are not quite parallel. Still, if something of the sort could be done, it would entail a proper training and consequent examination before being allowed to practice, and the certificate to practice would be of value, as failure to conform to a good professional standard of conduct would result in being struck off the rolls.

If we had a compulsory university training, with definite courses of study, should we get better men ? I think we should, especially if some portion of the training consisted in giving them a knowledge of craftsmanship as well as the actual work in the office of a practising architect. So a boy's training would be partly in the workshop, in the architect's office, and at the university.

The main purpose of your association, as is ours of the Builders' Institute, is to emphasize the value to the community of good building both as regards its influence upon the people, its enduring

qualities, and its comparative cheapness. We should be insistent in that purpose, and should somehow let the people know. We should do this not for selfish or personal ends or gain, but as a duty we owe to the community as the custodians of special knowledge upon this important matter.

The Toronto Bells

Their Royal Highnesses Princess Beatrice and the Duchess of Albany recently visited the Bell Foundry at Croydon to hear a recital on the carillon of twenty-three bells which is to be erected in Canada, and is the first of its kind to appear in that country, and is, moreover, one of the largest sets hitherto installed anywhere. This new carillon weighs altogether 17½ tons, and represents, musically, two chromatic octaves with the omission of the two lowest semitones. The tenor (largest) bell corresponds with the low A note, and in itself weighs four tons, or one ton more than the ringing tenor of the peal of twelve in St. Paul's Cathedral.

For carillon purposes this peal has been most carefully tuned to the scale of equal temperament, so that numerous melodies, accompanied by their proper harmonies, and with the necessary modulations (involving the use of chromatic notes) from one key to another, can be effected without the discords inevitable through the employment of older and less satisfactory methods. The programme so skilfully played by Mr. C. F. Johnston provided examples of familiar tunes made acceptable to the ear through this system of correct harmonic tuning, such as the hymn "Abide With Me," "The March of the Men of Harlech," and "I'll Sing Thee Songs of Araby," thus following from slow and sustained simple four-part harmonies to the more intricate progressions in use in the writing of songs.

In addition to the clavier keyboard which Mr. Johnston used in his recital, an electric machine is at present being completed, for use by two different methods, the first being by means of a paper roll machine which will work automatically at set times during the day, and the second by a pianoforte keyboard which the organist can play in his organ-loft. This particular machine has been especially designed for the purpose.

The whole ceremony was so well arranged, and the objects of interest so thoroughly worth investigation by the technical expert, the musician, and the layman, that the carefully conducted tours through the works revealed new points for intelligent consideration almost at every turn.

There is a "something" in all that appertains to bells and their making which creates an atmosphere and seems to link inseparably the romance of yesteryear with the sterner life of to-day.

The Royal visitors, with in attendance Lieut.-Colonel F. Packe, D.S.O. (Equerry) and Miss Bulteel (Lady-in-Waiting), were received at the Bell Foundry by Sir George Perley (High Commissioner for Canada) and Lady Perley; Sir Frank Dyson, Astronomer Royal and Master of the Worshipful Company of Clockmakers; the Hon. Mrs. Francis Colborne and the Hon. Rachel Caulfield; Sir Henry and Lady Lennard; Mrs. Cecil Harmsworth; Lady Newnes; Mr. and Mrs. Hugh Adams; Rev. Pat. McCormick, D.S.O. (Vicar of Croydon), and Mrs. McCormick; Mayor and Mayoress of Croydon; Town Clerk of Croydon and Miss Newnham; Mr. and Mrs. Howard Houlder (Mayor and Mayoress during the war); Mrs. A. A. Johnston and Miss Nora Johnston.

There were also present three gentlemen who are the best known ringers in this country, namely: Canon Coleridge, Vicar of Crowthorne, Berks, and President of the Central Council of Bell Ringers of England, who number about 40,000; Rev. Cyril W. O. Jenkyn, M.C., Master of the Oxford Diocesan Guild of Ringers; and Major J. H. B. Hesse, a prominent Surrey Ringer and member of the Central Council.

JULIA CHATTERTON.

Fees for Abandoned Housing

A special meeting of the Practice Standing Committee was convened on January 17 "to confer with interested architects as to the proposed negotiations with the Ministry of Health upon a scale for abandoned work."

The three delegates chosen to conduct the actual negotiations, Messrs. H. T. Buckland, Francis Jones, and Herbert Welch, were present, and listened to a vast amount of evidence offered by those who were sufferers under the scale as amended by the Ministry. Reference is made elsewhere to the action of the profession in regard to Sir Charles Ruthen's now historic paper, but it was obvious that the meeting felt that his speech had not, to say the least of it, tended to clear the air, or to simplify the present somewhat complicated situation. It is to be hoped that a better understanding may shortly be reached between the Director of Housing and his professional brethren, since, as one broad-minded speaker justly remarked, negotiations that are entered upon in other than a friendly spirit have but small chance of success.

Many columns could be filled with the long discussion that took place, and it was abundantly plain that the housing architect has very serious grievances. The original arrangement come to by the Ministry and the R.I.B.A. had been modified in a series of memoranda issued by the former, but these had not been confirmed by the other party to the agreement. The difficulty was to decide upon the minimum that might justly be demanded. Architects are clearly anything but greedy, but it is equally certain that they will not lightly submit to what amounts to a flagrant cancellation of contract. Common fairness, rather than a Shylock-like demand for a legal pound of flesh, will rule the day.

Cases are so varied that it is anything but easy to find a *via media*. Perhaps the rural architect, with a number of sites scattered over a wide area, only to be reached by an expensive motor, is the hardest hit, and the question of travelling expenses will be one of those that must be carefully thrashed out. The precise definition of the word "scheme," the question of payment by type, the inadequate payment for drainage plans, must come up for discussion; and inasmuch as the dispute is holding up accounts all over the country, and delaying payments long overdue, the profession will send forward its delegates with heartiest good wishes for a speedy and satisfactory settlement.

Adjustment of Buildi Trade Wages

The National Wages and Condi Council for the Building Industry, a meeting on January 12, considered w if any, variation of wages should be r in accordance with the Sliding S Agreement which provides that the of wages shall be varied half-yearly by halfpenny per hour in respect of each plete average variation of not less 6½ points. The figures in respect of "cost of living," published monthl the "Labour Gazette," show the ave percentage increase for the period Ju December 1921 (both months inclu to be 112.16, or 57.83 below the fi (170) to which the rates set out in original agreement are assumed to c spond, and consequently the rate wages for the ensuing six months sh be fourpence (4d.) per hour below rates ruling in April 1921.* On acc of this difference, three and a half p (3½d.) per hour has been deducted by vious adjustments.

The Council resolved :—

"That on and after the first da February 1922 the rates of w payable to craftsmen and labou engaged in the building indu shall be reduced by one halfpe per hour, provided always that rate paid to labourers shall not less than 75 per cent. of the cr men's rate."

Resolved further :—

"That a review of wages take p at the annual meeting to be he March, at a date which will rel the "Labour Gazette' figures that month available; and in vie the failure of agreement at December meeting on the h question, the hours question als be considered at the same mee subject to the consent of the ployer bodies concerned."

A. G. WHITE,
Employers' Secreta
R. COPPOCK,
Operatives' Secreta
A. J. LLOYD,
Clerk to the Council.

* The following illustration shows method by which the result is ar at :—

"Labour Gazette" Index Figures.

July	119
August	122
September	120
October	110
November	103
December	99
	6 | 673

Monthly average = 112.1

Figure agreed upon, in Clause 14(a) of Agreement II, as equivalent to wages ruling in April 1921	1
Deduct average figure for period under review	11
Difference	
Equal to 8 times 6½ points ..	
Carried forward on account of the next revision	

The Week's News

New School for Hayes.

n elementary school for 800 is to be at Hayes, Middlesex.

osed Industrial Hall for Richmond.

ıe building of an industrial hall to ide work is urged by the unemployed ichmond (Surrey).

New Banquet Hall for Surbiton.

ans have been approved for a ban- hall at the rear of the Masonic Hall .e Crescent, Surbiton.

Islington Infirmary.

decoration at a cost of £400 is to be ed out by direct labour at Islington dians' infirmary.

Wakefield and Town Planning.

a meeting of the Wakefield City ıcil it was decided to prepare a town- ning scheme for the borough.

New Home for Nurses.

. Bartholomew's Hospital hope to n shortly the building of Queen Mary's e for Nurses.

Thirty Million Unsold Bricks.

ıe Peterborough brick trade is re- d to be faced with a serious situation. than 30,000,000 bricks are stacked e yards.

Leeds Building Guild.

Leeds Building Guild has been formed very moderate scale, a number of being available to undertake all s of repair work in connection with uilding trade.

Extension of Hostel of St. Luke.

.e executive committee of the Hostel . Luke, Fitzroy Square, have decided work on the extension of the hostel be begun when a further £2,000 has subscribed to the building fund.

Folkestone's £46,000 Scheme.

lkestone Corporation have approved ıeme, costing £46,000, to extend the ll works to Copt Point, in order to ent the flooding of low-lying land ıg heavy rain.

French Canalization Scheme.

ıns are being prepared to canalize rench section of the Moselle at a of 77,000,000 francs (£1,500,000). ocks will be 115 ft. long, 40 ft. wide, 3½ ft. deep.

Catholic Cathedral for Liverpool.

meeting of clergy and laity, held at Convent of Notre Dame, Mount ant, decided to open a fund for the ing of a cathedral in Liverpool, as a orial to the late Archbishop White-

Housing at Abergavenny.

ergavenny's scheme for the erection steen houses, the first instalment of mbitious development of the area nd Bailey Park, is shortly to be n, the final preliminaries being now d out.

Rebuilding Reims.

e Marquis de Polignac, president of Reims Reconstruction Co-operative, opinion that Reims can be entirely lt in seven years, provided proper e made of the existing means. In 850 buildings will be reconstructed.

Islington Municipal Offices.

For the erection of the new municipal offices at Islington, the Town Hall Committee of the borough council has recommended the acceptance of a £61,000 tender of the Building and Maintenance Committee of the council.

New Cinema for Glasgow.

In reporting on page 119 of our issue for January 11 that plans were being prepared for a picture theatre at George Drive, Linthouse, Glasgow, we inadvertently stated that Mr. "James" Boyd, of Glasgow, was the architect. The name should read Mr. Joseph Boyd, I.A., of Glasgow.

Society of Architects and Sir Charles Ruthen.

At a special meeting of the Council of the Society of Architects held on January 18 a resolution was carried unanimously that they dissociated themselves from the views expressed by Sir Charles Ruthen, P.S.A., in his paper on "The Architect and the State," particularly as to the responsibility of the architectural profession for the failure of the National Housing Scheme, and the implication as to profiteering by architects in connection therewith.

Stands for the Royal Wedding.

The plans for the stands to be erected for the accommodation of guests at the marriage of Princess Mary at the Abbey are completed, and work has been begun by the Office of Works, under the direction of the State Department. The Westminster City Council are busy, too, with schemes for decorating the Westminster thoroughfares through which the bridal procession will pass.

New Bridge across the Spey.

A new bridge erected over the River Spey at Cromdale has been formally opened. The bridge is built with concrete piers, the centre piers being placed on reinforced concrete cylinders, sunk 8 ft. below the bed of the river. They are continued up to the rests for the ironwork, and further reinforced and filled with concrete, being tied together with heavy iron beams. The total span covered by the bridge is 208 ft., and the total length of the bridge is 248 ft.

A New Stoll Theatre Company.

The Stoll Picture Theatre (Liverpool), Limited, has been registered with a nominal capital of £380,000, divided into 379,900 ordinary and 100 management shares of £1 each. The company has been formed to purchase land and buildings in St. John's Lane and Queen Square, Liverpool, and to carry on the business of cinema and music-hall proprietors. Sir Oswald Stoll will be chairman and managing director. Sir Oswald will erect a "super" cinema theatre in Liverpool. The building will contain a theatre capable of seating over 3,000, a large restaurant, a roof garden with a dancing floor, and the lounges, reading, and writing-rooms of a first-class hotel or club. The building, which will have a frontage of 192 ft., will be in the Renaissance style and of Carrara marble, and the auditorium will be decorated with paintings by the best known British artists.

£170,000 for Abbey Restoration.

Restoration work at Westminster Abbey is now well under way, and already £12,000 has been spent upon repairs. A start has been made in Henry VII's Chapel, which is most in need of attention. About £170,000 has been received for the Restoration Fund, but at least another £30,000 is needed to complete the work satisfactorily. The stone used to repair the Abbey is specially brought from Portland, and, curiously enough, comes from a spot about a quarter of a mile only from the quarry where Wren obtained his stone for St. Paul's.

New Dry Dock at Swansea.

A new dry dock is to be commenced almost immediately at Swansea. It is to be constructed near the breakwater by the Palmer Shipbuilding and Iron Co., of Jarrow. The new dock is to be 710 ft. long, and will be one of the largest dry docks in the country. Negotiations between the trust and the company for the lease of the necessary land have been settled. A site for another dry dock slightly smaller (about 600 ft. in length), alongside the other site, has been retained. The work on the new dock will find employment for a large number of men who are now idle.

New Hotel in Canada.

Arrangements have been completed for the erection of a new hotel in a city in Eastern Canada to cost $1,500,000. H.M. Trade Commissioner in Toronto suggests that United Kingdom manufacturers of tiles, ornamental iron work, builders' hardware, lifts, and electrical equipment, furniture, etc., should send catalogues and price lists to the architects in charge of the work. Their name and address, together with that of the contractors and proprietors of the hotel will be furnished by the Department of Overseas Trade (Development and Intelligence), 35 Old Queen Street, London, S.W.1., to any United Kingdom firms interested, on application.

South African Grain Elevators.

Some correspondence has appeared more particularly in the South African papers, as regards the amount of work that would be placed in the hands of British manufacturers in connection with this contract. It is therefore, interesting to learn that Messrs. Thomas Faldo and Co., Ltd., have secured the contract for the asphalte work.

This, on account of the very many difficulties which occur on the site as regards pressure of water, etc., is a most important factor in the success of the enterprise, and when the whole scheme is completed, it will mean one of the largest contracts that has ever been placed for asphalte, amounting as it does to many thousands of pounds.

Obituary

Mr. George C. Ashlin.

Mr. George C. Ashlin, whose death occurred recently, was one of the best-known of Irish architects. The burden of his work lay in churches and schools, and, whether it was due to choice or chance, secular architecture to any great extent hardly filled a part in his long and successful practice. Towards the end of his professional career in 1911, there were few important buildings of the Catholic Faith in Ireland in which Ashlin had not had a hand. His largest building achievement was Portrane Auxiliary Lunatic Asylum, costing over two hundred thousand pounds, which commission he obtained in competition by producing a remarkably well-planned scheme clothed in the mantle of simple perpendicular treatment.

Mr. W. T. Oldrieve.

We regret to announce the death of Mr. W. T. Oldrieve, who for ten years served as principal architect in Scotland to the Board of Works. In that capacity he carried out many important works, including the new parcel post and telephone office at Glasgow, new post offices at Kilmarnock, Lerwick, and Oban, the extension of the Edinburgh Post Office, and the reconstruction of the Royal Scottish Academy and the National Gallery. In 1908 Mr. Oldrieve was appointed a member of the Royal Commission on the Ancient Monuments of Scotland. His discovery of David's Tower at Edinburgh Castle was described as the most important "find" since Daniel Wilson identified St. Margaret's Chapel there fifty years ago. Holyrood Palace, Stirling Castle, and Elgin Cathedral benefited by his skill, while he also carried out the restoration of the roof of Glasgow Cathedral at the cost of £16,000.

Mr. W. S. Weatherley.

It is with deep regret that we announce the death of Mr. William Samuel Weatherley, F.R.I.B.A., at the age of seventy-one. Articled in 1867 to Mr. G. Gilbert Scott, Jun., Mr. Weatherley went into Sir Gilbert Scott's office about 1872, primarily to help on the competition drawings for the Berlin Houses of Parliament. He stayed there for about six years, and then, with Mr. F. E. Jones, a companion worker in that office, started independent practice, and the two were associated for many years. Mr. Weatherley made all the drawings for the published edition of Sir Gilbert Scott's Academy lectures; he also, in conjunction with the late Mr. William Brindley, published, in 1887, a book on Ancient Sepulchral Monuments, for which he made all the beautiful illustrations; he also illustrated Mr. Albert Hartshorne's book on Old English Glass. Among his architectural work may be mentioned the rebuilding of Hatchett's Hotel in Piccadilly, new premises in Maddox Street for Edward Arnold, the publisher, and additions and alterations to Carbisdale Castle, N.B.; he was also responsible for much important church restoration work. He prepared all the working drawings for the great Roman Catholic church which Mr. G. G. Scott, Jun., designed for the late Duke of Norfolk at Norwich. An introduction to Count Bentinck in 1880 was the beginning of a successful practice in Holland, where, among other works, he carried out extensive alterations and additions to Count Bentinck's house at Middachton and to the adjoining church, similar work for another member of the Bentinck family at Weldam Castle, and for Baron van Heeckeren Wassenaer.

Mr. H. T. Sandy.

It is with extreme regret that the many friends of Mr. Henry T. Sandy, of Lichfield Road, Stafford, senior partner in the firm of Messrs. Sandy and Norris, architects, have learnt of his death, in a London nursing home. Mr. Sandy, who had had a long and extensive architectural practice, comprising most classes of work, was a son of the late Mr. Henry Sandy, who was for many years agent to Lord Stafford. He served his articles under the late Mr. Nicholas Joyce, in the same offices he occupied up to his death, and after a short period of his professional career had been spent with a Hanley firm, he succeeded to Mr. Joyce's business on his death about twenty years ago. He carried on the business alone until a few years ago, when Mr. E. Norris entered into partnership with him. Many well-known buildings in the district were designed by him, notably the schools in Stone Road and Lichfield Road, the Lotus factory at Stafford, and, more recently, the Sandonia Theatre. He had also done a good deal of church work, and was responsible for the plans of some of the largest schools in Birmingham. He held the office of surveyor to the Forebridge Drainage Commissioners.

The Guards' Memorial

Sir Reginald Blomfield, R.A., and Sir Thomas Brock, R.A., the assessors in the competition for the most suitable design for the Guards' War Memorial, to be placed on a site on the Horse Guards Parade, have selected the design of Mr. Gilbert Ledward, the London sculptor.

This embodies a group of five figures representing the five Guards regiments, standing in repose on a continuous plinth, and cast in bronze. The monument will be one of the biggest of its kind in London. It will have a frontage of about 100 feet and will be about 40 feet high.

The plinth on which the figures stand is to rest on a podium, at the foot of which will be three steps. In low relief beneath the figures will be the badges of the five regiments. Bronze panels at the sides will show the "Order of Battle," and there will be a bronze panel in low relief of a field gun in action. Apart from the figures, the memorial will be built of Portland stone.

Mr. H. Chalton Bradshaw, has been chosen as the architect. Mr. Bradshaw was a student at Liverpool University, and he is hon. secretary to the Faculty of Architecture of the British School at Rome.

Mr. Ledward received his general education at St. Mark's College, Chelsea, and at Karlsruhe, in Germany. He afterwards studied art at the Chelsea Polytechnic and the Goldsmiths' College. In 1910 he won the British Institution Scholarship in Sculpture, and then entered the Royal Academy Schools, gaining the Armitage Prize. In 1913, he won the Rome Scholarship in Sculpture.

Latest List of New Inventions

Latest Patent Applications.

379.—Harbord, F. W.—Manufactu cement. January 5.

143.—Hunter, V. J.—Reinforced-con floor. January 3.

57.—Rowe, J. B.—Centering a shuttering for concrete fl etc. January 3.

91.—Todd, J.—Ventilating tubes chimney cowls. January

75.—Tozer, F. M.—Horizontal sla etc. January 3.

565.—Turniss, T.—Capping and joi means for roofing slabs. J ary 7.

Specifications Published.

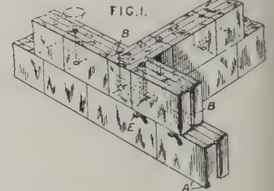
173015.—Brown, C. A. H.—Walls buildings.

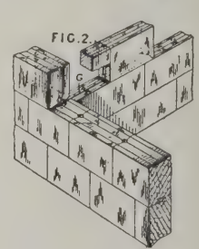
173045.—Airey, E.—Concrete slab blocks and piers and p employed in the constructi walls and buildings.

173058.—Blunn, J.—Precast reinfo concrete slabs for concrete fl ceilings, and the like.

Abstract Published.

171624.—Building-bricks.—Cullen, L. Westbere, Cromwell F Whitstable, Kent.—Walls formed of bricks with b recesses, preferably of V-sh on their top and bottom A', and with narrow recess preferably rectangular, on end faces, grouting being r to secure the brick toge





Partition walls may be jo by providing bricks with side recesses to aline with recesses in abutting brick shown in Fig. 1, or by provi a metal tie G in the V-groo as shown in Fig. 2. Co bricks are angled and prov with top and bottom ar recesses. Tilting bricks be wedged to correct pos by wedges E. Specifica 3616/75 and 14805/13 are ferred to.

The above particulars are specially prepare Messrs. Rayner & Co., Registered Patent Age 5 Chancery Lane, London, from whom readers Journal may obtain all information free relati patents, trade-marks, and designs. Messrs. Rayner will obtain printed copies of the published specific and forward on post free for the official price of 1/-

nesday, February 1, 1922. Vol. LV. No. 1413

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

SOME OLD WEATHER-BOARDED COTTAGES.

27-29 Tothill Street, Westminster, S.W.1.

A Polish Castle

By Professor Noakowski

This drawing is taken from McLean's Gallery in the Haymarket, where an exhibition of Professor Noakowski's work was on view until the end of January. He is a Pole, and his work has not hitherto been seen in England, but he is now the talk of architectural and art circles in London. The qualities of his work are more subtle than they appear, but perhaps his fundamental characteristic is what [illegible] to forms as solids, not to forms as patterns. To this quality the castle

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

esday, February 1, 1922 Volume LV. No. 1413

"Now is the Time to Build"

THIS is disinterested advice. At least, it comes from an impartial source—namely, "The Daily Chronicle," which cannot be suspected of any sort of collusion with the building industry. dvice forms the heading to an article in which are set the results of an inquiry that was evidently made in the public interest. That the article was not n by an architect, nor by a builder, seems clear from al evidence. Neither a professional nor a practical ould have written this passage, which stands out from st of the article with all the prominence that bold type can give it: "The fact is that the golden age of uilding rings is badly tarnished. Their power is still but their grip on the industry is relaxing."

loose a term as "building rings" would not have been by any one connected with the building industry. It ys a false impression. "Anti-building rings" would been nearer the truth. They are not rings of builders, f other persons, who have, by profiteering, made ng impossible at the price. This is no mere quibble. ntended as a serious protest against a prevalent misuse ms. The totally unjustifiable expression "building " has been so freely bandied about in newspapers as nvey to the public mind a false impression of the ng industry, which is being blamed severely and tously for the sins committed by dealers in building es. Nice discriminations cannot be expected from neral public, who, ardently wanting houses and other of buildings, make haste to cover with odium anyone who seems to stand in the way.

public are so credulous in such matters. It is quite le that some of them are so extremely gullible as to w even the crass and malicious slanders recently against the architectural profession. Hence the ability of discarding the term "building rings" for other that, more accurately reflecting the facts, shall ast a slur on the inoffensive builder, who is himself ief sufferer from the operations of the rings that—s to loosely worded newspaper headings—he is arly believed to have originated. It is a pity, and is strange, that in the present instance the newspaper was not cautioned against the use of the unfortunate ischievous, but apparently fascinating term "building "; for the gentleman he interviewed is described as xpert who knows the building trade from A to Z," ho must therefore know very well that it conveys a and mischievous imputation. This expert, however, the interviewer a very reasonable (but quite inade-) theory of the causes of stagnation in the building try. He seems disposed to credit the Excess Profits s with an unhealthy boom that in 1920 sent up prices. ver the country, manufacturers diverted their excess s to building. They preferred to put up new factories ring a heavy cheque to the State. With such a motive was no object. Contractors had practically *carte e*. There was an all-round shortage of material, and titive prices were paid for it." There was also com-n for labour, which interpreted this as a signal for high wages and low output. So up went the cost of building, and, when the end of E.P.D. was announced, building slackened off to nullity or thereabouts. Wages came down, but the prices of certain materials remained sky-high without reason or excuse. Recently they have all, with one or two unimportant exceptions, come down, some of them with a run. The "Chronicle" interviewer gives a list of materials in which the prices have been reduced. Among them are bricks, seven-and-a-half per cent. cheaper; timber, sixteen to twenty-five per cent.; cement, twenty-one per cent.; rolled steel joists, thirty-three per cent.; York stone, seventeen per cent.; and several other instances of decrease in price are enumerated, including, one is specially glad to see, rainwater pipes, which are now thirty per cent. cheaper than they were.

But, as we have said on other occasions, the cause of depression is not to be found on the surface. Rings, profiteering, decreased output, are all contributory causes to "the slump in building." Being visible and tangible, they are apt to divert attention from the causes that are fundamental—the results of withdrawing for many years millions of men from productive labour, and setting them on to the work of wholesale destruction, and the vast waste of wealth and energy, skill and talent on the means and the engines of destruction, making the world a blood-stained scrap-heap; the disorder of the nerves and sinews of man and of his commerce: the dislocation of capital, the disorganization of finance through the instability and fluctuation of values; through the complete upheaval of most of the elements, moral and material, of civilization as understood before the war. A man suffering severely from shell-shock is apt to make a slow recovery. A world suffering from shell-shock could not be expected to right itself immediately after the armistice. That it is well advanced towards convalescence may be inferred from the general fall of prices, from the growing disposition of the workers to throw off their lethargy, and, in short, from the general outlook, which is fairly peaceful and as nearly normal as can be reasonably expected.

The present generation cannot hope for much better times. Let us quote once more from the expert interviewed by the representative of "The Daily Chronicle." He said: "People who intend to build, and who are holding off indefinitely in the hope of a further and immediate great fall in prices are, in my opinion, wrong. We cannot hope to look forward to anything like pre-war prices. Those who intend to build should, for everybody's sake, put the work in hand as soon as they can." That is the considered opinion which "The Chronicle" writer has translated into his terse caption: "Now is the Time to Build," and we take this to be a wise, just, and true interpretation of the expert's deductions from the visible portents. For to wait any longer is to run the risk of fruitlessly losing time; and time is money. There is always the possibility of reaction, and prices, so far from becoming still lower, may very possibly rise again sharply in consequence of a boom in labour and materials. And to speculate for a fall and realize a rise would in this instance be very bad business.

Notes and Comments

Sir Charles Ruthen and the S.A.

THE inevitable has happened. Sir Charles Ruthen has resigned from the Presidency of the Society of Architects. Here is the statement issued by the secretary of the Society of Architects last Thursday evening: "Following the resolution unanimously passed at a special meeting of the Council of the Society of Architects on January 18 dissociating themselves from the views expressed by Sir Charles Ruthen (the president) in his paper on 'The Architect and the State,' and other resolutions unanimously passed at the same meeting, Sir Charles Ruthen attended at the meeting of the Council this evening and tendered his resignation as president, which was accepted by the Council." It was "the only way" in which to deal with so disagreeable an incident, and was the course which everybody anticipated. The Society of Architects is to be congratulated on its due sense of propriety. In dealing thus with Sir Charles Ruthen, however, it has simply confirmed the well-established principle that the president of a professional society may not abuse the position in the interests of political propaganda. So blatant a breach of discipline could not be condoned.

Building-Heights in Provincial Cities

Some interesting information on the tall buildings question has been extracted from the evidence recently given before the Royal Commission on Fire Brigades and Fire Prevention. It summarises a few of the building regulations imposed in some of our large cities. Birmingham does not restrict height, and there is no limitation of cubical contents. In Bristol there is no limitation of height. In Edinburgh buildings may not go higher than 60 ft. without special consent, and in any increase permitted account is taken of the width of the street. Glasgow has a regulation limiting height to one-and-a-half times the width of the street. The maximum height is fixed at 100 ft., but there is in existence a building 130 ft. high, facing an open space. The allowable cube is stated as 350,000 cubic feet, but in some cases it amounts to 700,000. Interesting as these statistics are, they do not prove much either for or against increased height in buildings, and they refer too insistently to merely utilitarian issues. The æsthetic side of the argument is too often ignored in this way. "Business men" are greatly mistaken if they imagine that it does not count.

The Question of More Working Hours

Organized building employers have instructed their representatives on the Wages and Conditions Council to press for a longer working week, "by negotiation if possible, but without yielding in the slightest the position of freedom of action." They are not unanimous in assuming this determined attitude. An influential employer thinks that "to extend the hours at a time when there is so much unemployment would be disastrous, and would create hostile public opinion." No doubt it would; the labour agitators would see to that, and their agitation would be the more effective for the kernel of truth it would contain. They would prove their case by simple arithmetic. They would argue that the greater the number of hours worked per capita, the fewer would be the men required for a given amount of work. That implies, in the aggregate, a considerable increase in the number of the unemployed, a result that, in the present state of the labour market, is appalling to contemplate. Why, however, do the employers want the number of hours increased, seeing that payment is by the hour? And why should the workers refuse so innocuous a request? To the first question the obvious answer is that an extremely short working day is wasteful of "establishment" charges—that the day's productive work is disproportionately small as compared with costs of staff and supervision, and s overhead charges as rent, rates, and taxes. Further, s hours make inconveniently long contracts. To the sec question the answer is that the workers, while offerin their ostensible reason their concern lest longer h should imply a greater amount of unemployment, really afraid that the lengthening of the hours is a liminary to lowering the wages—that ultimately the wo will get no more for the longer week than he gets for shorter. That, of course, is not the intention of the ployers; but it would be well if, avoiding a dictatorial t they would explain to the men in a frank and friendly the needs of the situation.

"The Institute and Unification"

An eight-page quarto pamphlet, signed by Me A. W. S. Cross, H. D. Searles-Wood, George Hubbard, Sydney Perks, the two last-named being described as secs. of the R.I.B.A. Defence League, of which it is st that the "League is not opposed to Registration, b does oppose the principle of bringing all the architect the United Kingdom into membership of the R.I.B *before* the passing of a Registration Act, and until the becomes law we are of opinion that no alteration sh be made in our charter or by-laws with the view to facili the admittance of new members. Meanwhile the sys of compulsory examination should be maintained, as avenue leading to membership of the Institute." As hon. sec. of the Institute has already disavowed any in tion of the Council to admit unqualified persons as mem of the Institute, the object in scattering this pamp broadcast is not apparent. Do its sponsors seriously tend that there is any danger of the abolition of compul examination for membership? If they do, we should glad to be informed on what grounds they base this i ence; and, speaking quite impartially, we should l thought that before issuing such a manifesto the Le would have awaited the publication of the report of Unification Committee.

The Associates and Registration

The Representative Committee of Associates appoi by the R.I.B.A. last June to deliberate on the allied sub of Unification and Registration have presented their re to a special meeting of Associates which was held January 24. It gave rise to a very healthily animated cussion, in which both sides—or it would be more co to say all sides—of this momentous question were freely canvassed. As will be easily understood, no dec was reached, and the debate was adjourned. In the cumstances, comment on the proceedings would be pr ture, and we therefore refrain from offering any observa on the subject until such time as the Associates shall succeeded in arriving at a definite decision on the b issues.

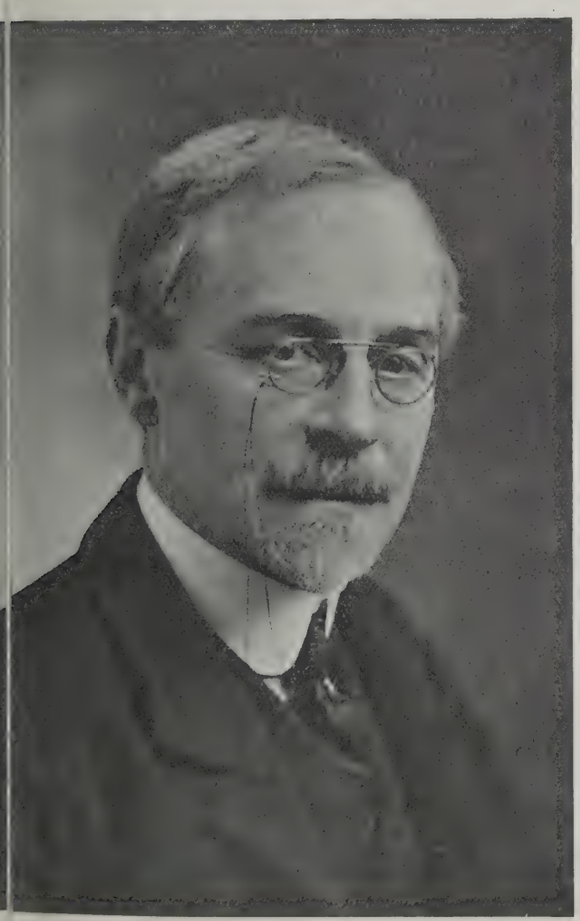
The State and Brick Buying

In his speech at the Westminster Central Hall "p rally," the Prime Minister reaffirmed the principle Government should interfere with trade as little as pos It was a good thing to say, and to say with all pos emphasis. It should disabuse the minds of some o bureaucrats who appeared to be acting on a diametri opposite theory. It could hardly have been an undesi coincidence that very shortly after the Prime Mini enunciation of this pure doctrine of non-intervention official announcement was made that on January 3 contracts between the Ministry of Health and brick m facturers for the supply of bricks for assisted ho schemes will be cancelled, and that local authorities then be able to make their own arrangements with m facturers as to the price of bricks.

rnest Newton: A Great English Architect

ERNEST NEWTON is dead. Those who knew him personally will sincerely mourn him, as will those who knew him only through his great reputation, and through his serenely beautiful houses, of which the , stamped though it was with strong but unobtrusive iduality, carried on the great tradition of English stic work, and gave it added lustre. Redcourt, elands, Ardenrun Place, and many other stately s, proclaim him a pupil, but by no means a copyist, rman Shaw, to whom he was articled in 1873. Strong unobtrusive individuality was the mark of the man elf. It distinguished him when the burden was laid him of fulfilling the extraordinarily onerous duties that o him as President (1914–1917) of the Royal Institute itish Architects during the most critical years of the t War, in which his sons were risking their lives with icuous gallantry.

s fellow architects, who knew his work and loved the accorded him (in 1918) the supreme honour it is in power to award. The King of the Belgians was pleased cognize his hospitality to Belgian refugees by conferring him the rank of Officier de l'Ordre de la Couronne; he was made an Hon. Membre de la Société Centrale Architecture de Belgique. His genius, no less than his nity, was recognized by the French, who made him fficier d'Académie de France, and a Membre Corresant de la Société des Architectes diplomés par le vernement. It was only in England, where officialdom s nothing about architects, and cares less, that Governrecognition of his war-time services was niggardly nd belief. Now that Ernest Newton has passed nd the reach of earthly reward, we are free to say that we regard the Government's recognition of his services as despicable.



THE LATE MR. ERNEST NEWTON, R.A.

His eminence as an architect of unexcelled skill in a class of work that constitutes England's chief or sole claim to supremacy—the capture and apt embodiment of the very spirit of the home; his difficult and onerous tenure of office as President of the R.I.B.A. during the most trying period of the war, when by his incessant labours he undermined his health; his solicitous care for the welfare of the Belgian refugees; his important work for the Ministry of Munitions—any one of these strenuous activities, or of these high and fine qualities of art and beneficence, should have brought him a baronetcy. The Government assessed them as worth a C.B.E. !—only that and nothing more. This for a man than whom no one was more respected and esteemed by the profession of which he was the head—not merely the nominal and titular, but, by accomplishment, the actual head. In neglecting such a man, Government showed as little fairness and discretion as it has displayed on too many recent occasions in dignifying the unworthy. Why he did not receive the title he had so clearly earned was because self-advertisement was utterly abhorrent to him. In him, modesty was almost a fault. In the estimation of the profession, no reward would have been too great for a man whose work they admired, and whose personality they loved.

This is what Mr. Paul Waterhouse said of him *ex cathedra:* "We tried at the end of the war to tell Newton on a little scrip of parchment what we thought of his work as President during the terrible subversion of our civilization that our world went through. I hope it will always be remembered of Newton that a man whose happiness consists, I believe, in the creation of some of the tenderest and most tranquil of domestic architecture, said to himself: 'Here is an exceptional and perhaps uncongenial job ready for me to do. It is a call. I will answer it.' Some of us know with what tact and grace, but at the same time with what infinite labour, and, I suppose, fatigue, he laid hold of and carried through that heavy task." There is no exaggeration in Mr. Paul Waterhouse's graceful phrase, "tenderest and most tranquil of domestic architecture," and, as we said on the occasion of his being awarded the Royal Gold Medal, the two chief styles he has made his own—the one recalling the peculiar homely charm of the Tudor type of dwelling the other following the more sedate and stately lines of the Georgian mode: "Upton Grey," Hants; and Ardenrun Place, in Surrey, representing respectively the first and the second of these distinctive types. In these, and, indeed, in all the work of his hands and of his conception, grace and suavity, harmony and sincerity, dignify the building as they typify the man; who, though he was stupidly and unfairly denied that title conventionally, was in nature and in deed "a very perfect, gentle knight."

For all his gentleness, his activities, as we have seen, were unbounded. No good movement that could be in any way associated with architecture appealed to him in vain. He helped, in the early 'eighties, to form the Art Workers' Guild, and its meetings were held in his offices. He was chairman of the R.I.B.A. Board of Architectural Education. Lately he has been very strenuous in advocating, in the press, the mitigation of the smoke nuisance; and at the beginning of last year he was appointed chief editor of "The Architectural Review." Within the limits he imposed upon himself, he was a great architect. There were no limits to his spiritual greatness as a man.

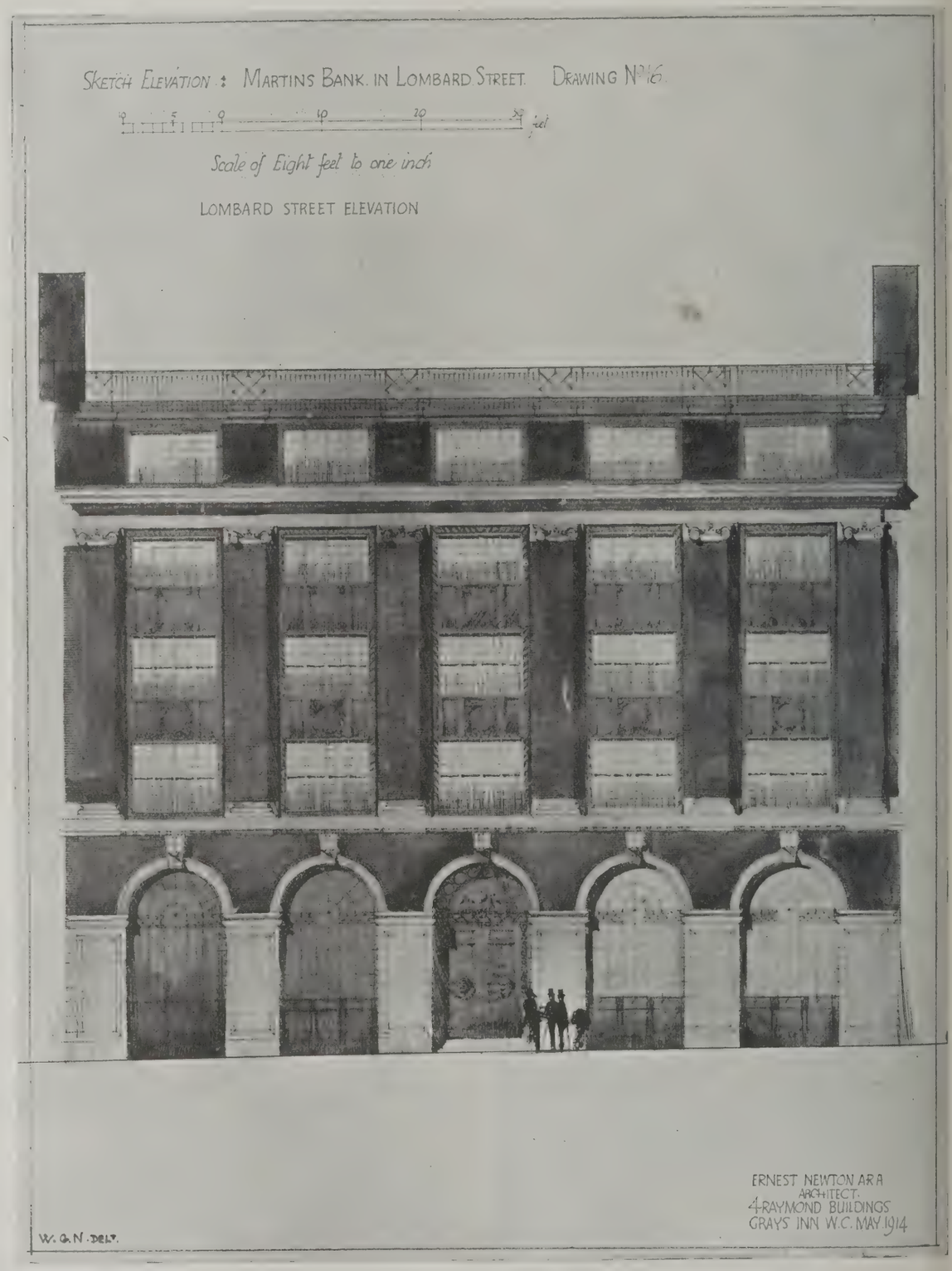
Mr. Newton died from pneumonia, after only five days' illness, at his residence, 17 Blomfield Road, Maida Hill, on Wednesday, January 25. Born in September, 1856, he was educated at Uppingham, and, after leaving that school, entered Norman Shaw's office, where he worked for six years in association with a number of men, pupils and assistants of Norman Shaw, who all distinguished themselves in the practice of architecture, and among whom may be

mentioned Professor W. R. Lethaby, Mervyn E. Macartney, and E. S. Prior, A.R.A.

His principal buildings were Bullers Wood, Chislehurst; Redcourt, Haslemere; Steep Hill, Jersey, a delightful example of his more mature manner; Glebelands, Wokingham; Ardenrun Place, Blindley Heath; the House of Retreat and Chapel of the Sisters of Bethany; and St. Swithun's Church, Hither Green. His last piece of work was a war shrine for his old school at Uppingham.

Mr. Newton was President of the Royal Institute f British Architects during the critical years of 1914 to 19 He was elected A.R.A. in 1911 and R.A. in 1919. He v awarded the Royal Gold Medal in June, 1918. He marri in 1881, Antoinette Johanna Hoyack, of Rotterdam, a had three sons, of whom one, Colonel W. G. Newton, is n President of the Architectural Association.

The funeral took place on Saturday at 12 noon at t Golders Green Crematorium.



MARTINS BANK, LOMBARD STREET, LONDON, E.C.
THE LATE ERNEST NEWTON, R.A., F.R.I.B.A., ARCHITECT

Photo: Thomas Lewis, Ltd.

"FEATHERCOMBE," HAMBLEDON, SURREY. THE LATE ERNEST NEWTON, R.A., F.R.I.B.A., ARCHITECT

ARDENRUN PLACE: GARDEN FRONT. THE LATE ERNEST NEWTON, R.A., F.R.I.B.A., ARCHITECT.

UPTON GREY MANOR. THE LATE ERNEST NEWTON, R.A., F.R.I.B.A., ARCHITECT

The Development of Aldwych

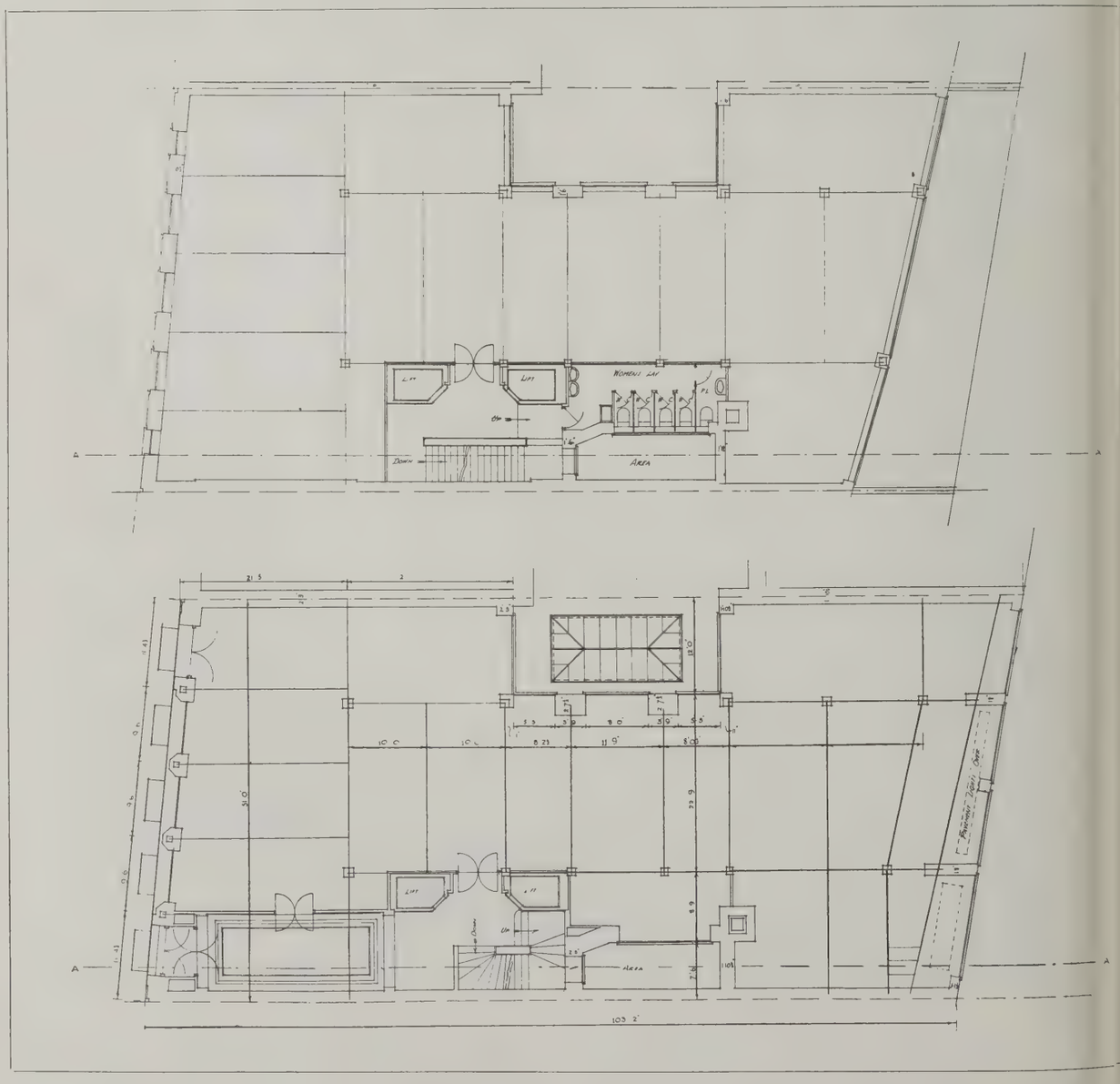
IT is nearly twenty years since the Kingsway and Aldwych improvement scheme was first taken in hand, and not yet are all the building sites occupied, though the process of filling in is being brought rapidly towards completion.

Much as lovers of London lamented the disappearance (through the creation of Kingsway) of a characteristic section of old-world London—which included the incomparably picturesque if not entirely sanitary Wych Street, with its overhanging bays and gables, and the equally fascinating Holywell Street, with its delectable book shops—the improvement in traffic communications which has resulted may be said to have justified the clearance, if the scheme is regarded only from the utilitarian point of view.

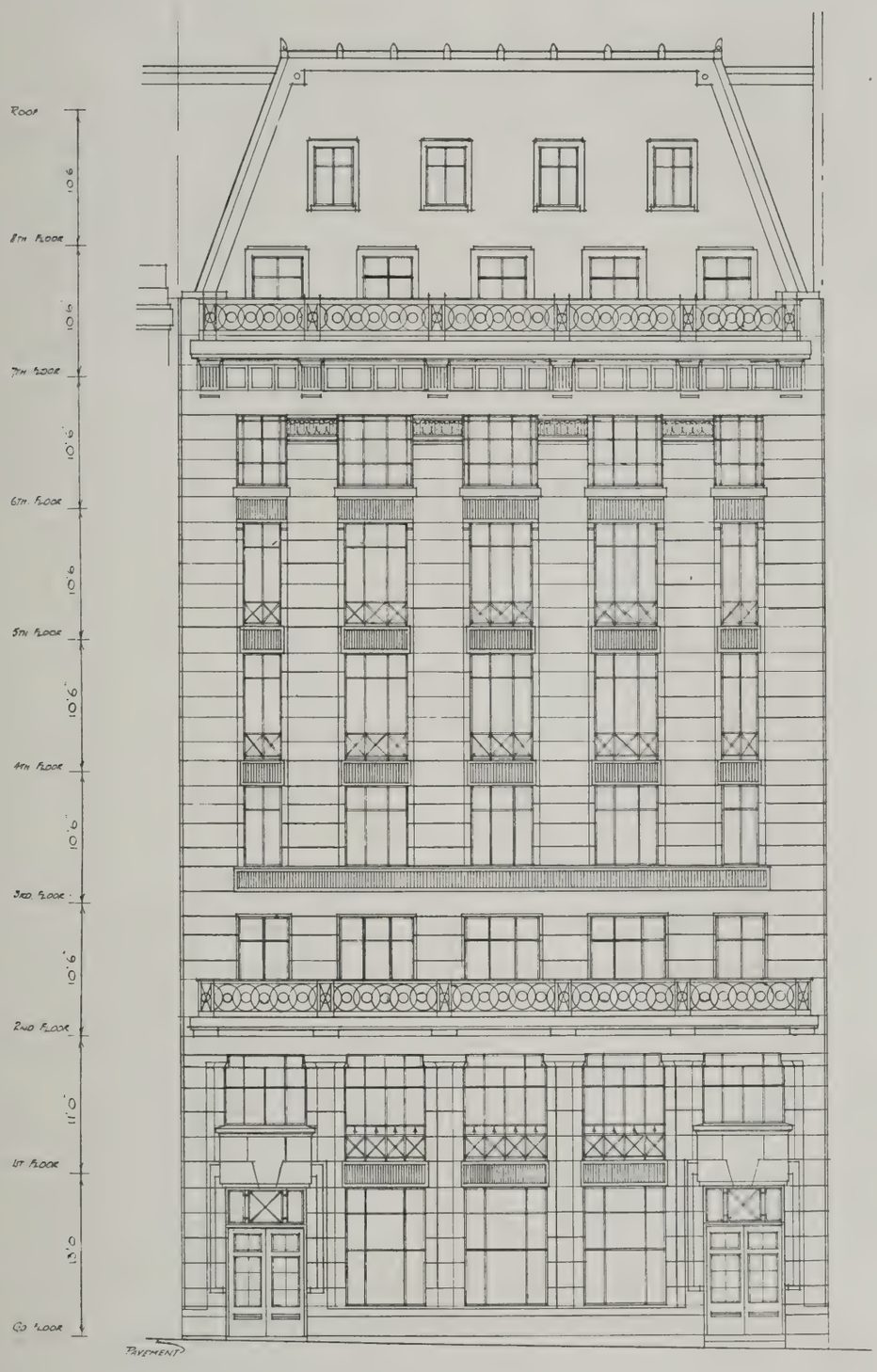
But architecturally something worth while has undoubtedly been accomplished. The result might certainly have been entirely different if the recommendations of the committee of architects appointed by the L.C.C. to advise on architectural treatment had been adopted. We should at any rate have had one general height for buildings; the skyline would consequently have been a little more ord and the shouting conflict of one building with ano might possibly have been avoided. Who can say? are a nation of individualists, and have not yet caught knack of harmonious street design which is the ha possession of our French confrères.

Kingsway, in any case, is thoroughly English, and regards architectural character, affords a fair index to quality of contemporary design. Some of its earlier bu ings make rather a poor showing; but the newer structu particularly those at the lower end, reveal a defi attempt at unity of scale and architectural treatment as London has not seen since the days of Nash.

Aldwych has been longer "filling up" than any o part of the scheme. The western arm was soon occupi Shaw and Runtz's Gaiety Theatre and Restaurant b latter now Marconi House), and, on the opposite s Mewès and Davis's "Morning Post" building, Mars Mackenzie's Waldorf Hotel, and Sprague's flanking thea being quickly erected. On the other arm, however, t the lately completed Australia House (also by Mars



PLANS OF ASTOR HOUSE, ALDWYCH. TREHEARNE AND NORMAN, ARCHITECTS.

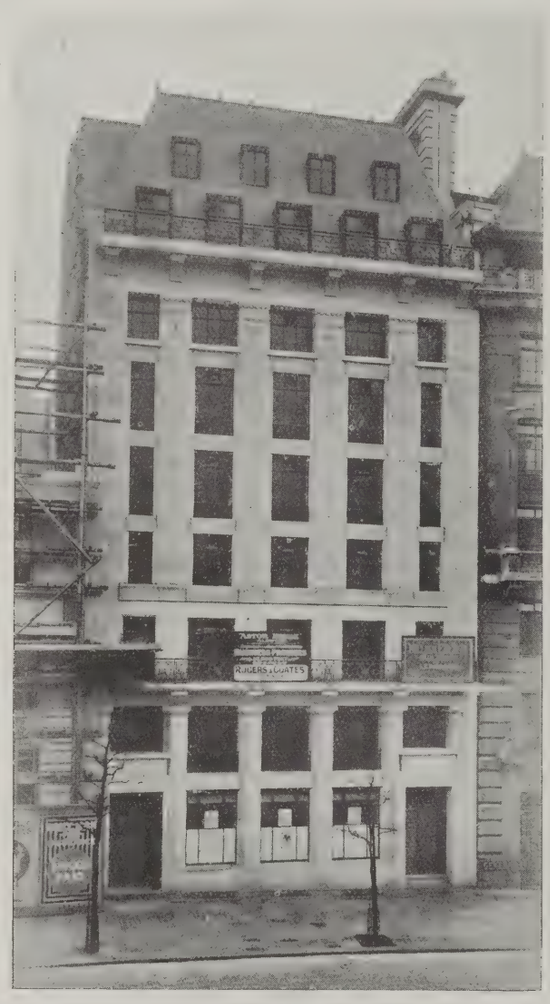


ELEVATION TO ALDWYCH

ASTOR HOUSE: ELEVATION TO ALDWYCH. TREHEARNE AND NORMAN, ARCHITECTS.

Mackenzie) took shape, the only building for many years was Sir John Burnet's General Accident Insurance building (on the north side). The remaining parts of the site continued as glorified rubbish heaps, over which vegetation grew in luxuriant profusion, until Mr. Bush recently acquired the famous island for his "Terminal Building," the middle section of which is now being built from the designs of Harvey W. Corbett, the distinguished American architect.

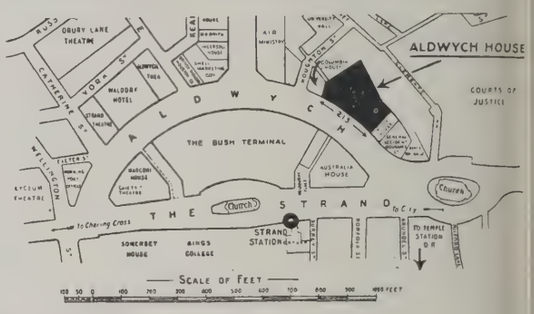
The latest buildings to be erected (and these to all intents and purposes complete the architectural equipment of Aldwych) are Astor House (Trehearne and Norman, architects) and Aldwych House—for Agricultural and General Engineers, Ltd. (Gunton and Gunton, F. and A.R.I.B.A., architects), these buildings (both illustrated in this issue) being next to one another and on the north side of the eastern arm. A further building similar in design to Astor House will be erected at the other end of Aldwych House by Trehearne and Norman.



ASTOR HOUSE: GENERAL VIEW OF EXTERIOR.

In Astor House the aim of the architects was to secure an effect of extreme simplicity, and in this they have been completely successful, producing a very effective front with a plain treatment of solid and void, piers and windows being of equal width. A touch of richness is imparted to the two lowest stories by the introduction of polygonal columns (which consist of a casing of Portland stone around steel stanchions) and by a simple but well-designed balcony rail across the whole width of the front. Subsidiary ironwork is effectively introduced into the voids below. The conventional shop-front treatment has been entirely avoided, yet the ground floor is as perfectly lighted as the upper floors. The construction is a combination of mass concrete with steelwork, to comply with the regulations of

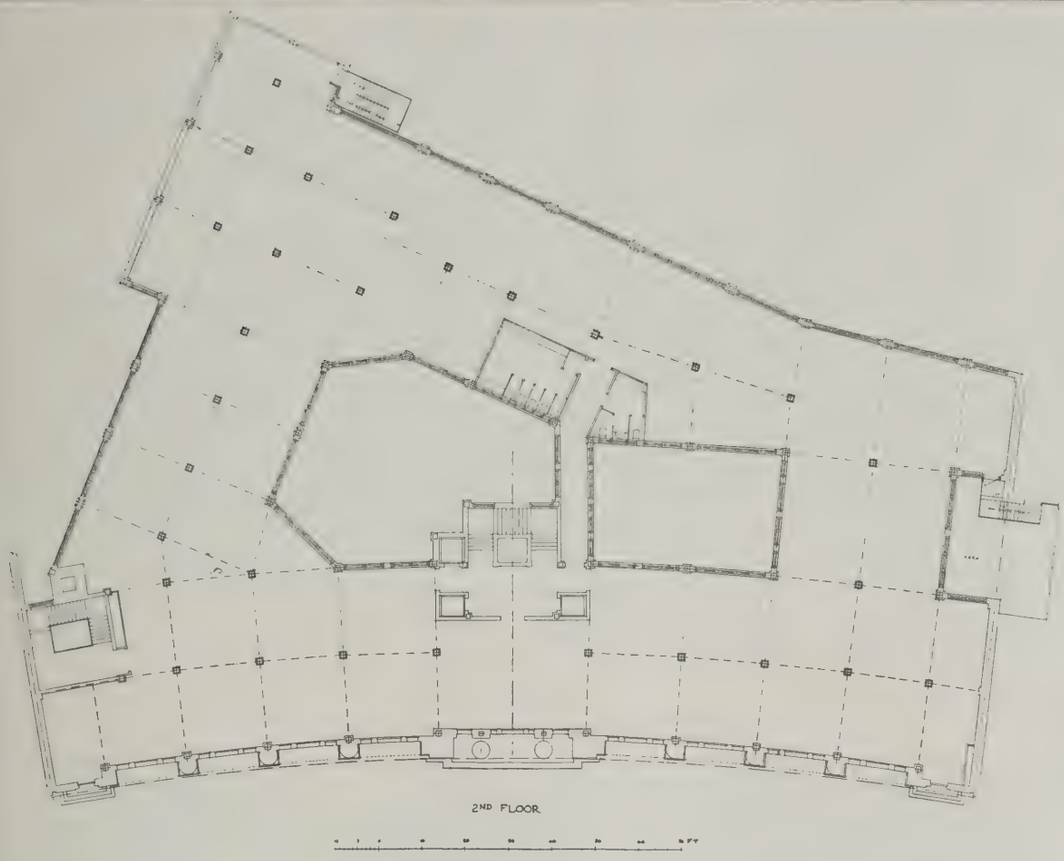
ASTOR HOUSE: DETAIL OF ENTRANCE.

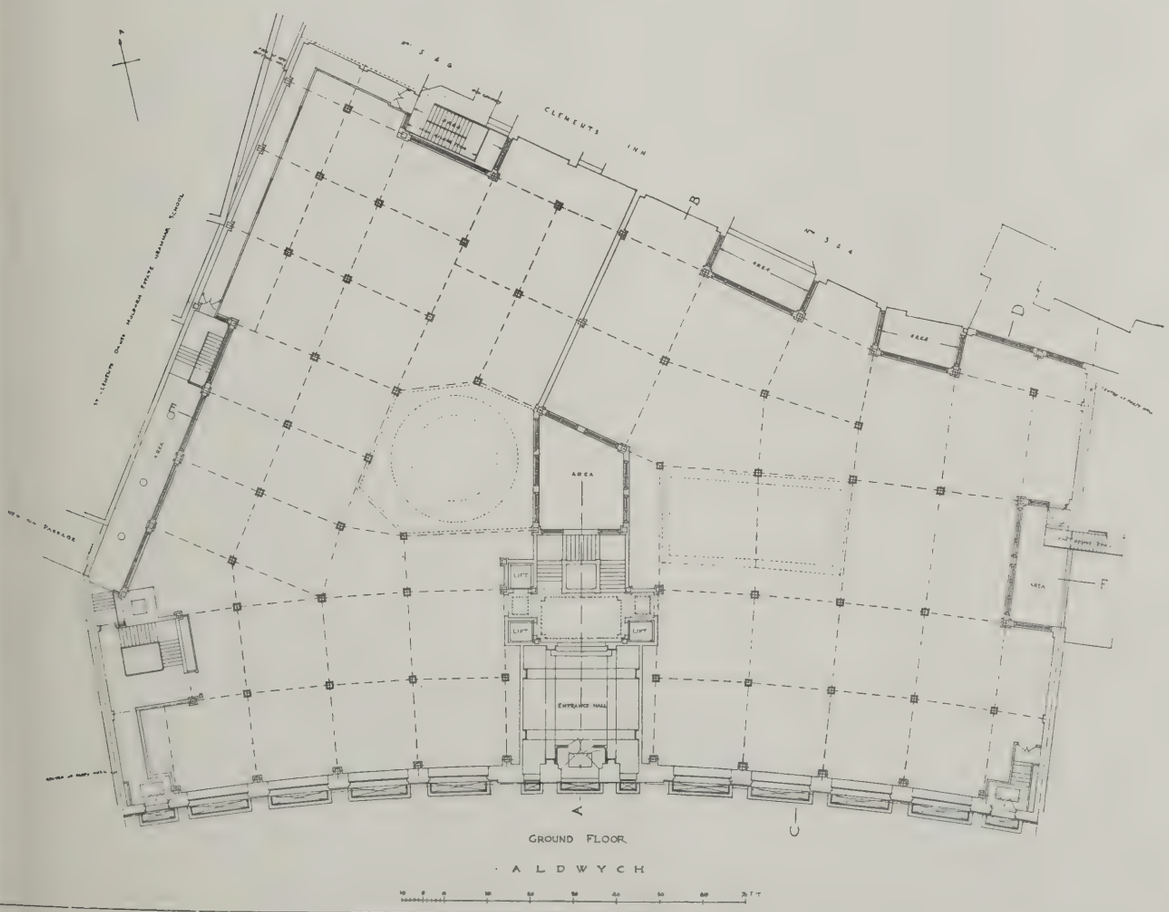


PLAN OF ALDWYCH.

ASTOR HOUSE: VIEW IN ENTRANCE HALL.

This building, which is now in course of erection on the north side of the eastern arm of Aldwych, has a frontage of 213 ft. and occupies a ground area of some 30,000 ft. super. It has been planned to provide extensive office accommodation, and its great unobstructed floor areas will be divided up to suit tenants' requirements.
Plans are reproduced on page 197.





ALDWYCH HOUSE: GROUND- AND SECOND-FLOOR PLANS. GUNTON AND GUNTON, F. AND A.R.I.B.A., ARCHITECTS.

the L.C.C., the facings being of Portland stone. The roof is covered with green Westmorland slates, and the doors are of oak.

Aldwych House obviously presented a totally different architectural problem, and the architects, Messrs. Gunton and Gunton, have evolved a successful elevation in which a large order plays a prominent part. The order has been so widely employed in Aldwych—there is Norman Shaw's open colonnade to the Gaiety, Marshall Mackenzie's great ranges of columns to the Waldorf and Australia House, and Mr. Corbett's columned entrance to the Bush Building—that it was as good as predetermined for a building with the great frontage of 213 ft., and one moreover that is complementary to the Waldorf Hotel, occupying as it does a balancing position on the opposite arm of Aldwych's semicircular sweep. The treatment of the shop fronts is extremely good, and so clean a roof line is something of a novelty for London.

Aldwych House has a southern aspect, and covers a ground area of some 30,000 ft. super. The elevation is of Portland stone. The building consists of sub-ground floor, ground and eight upper floors, of steel frame construction, with large unobstructed floor space capable of division to suit different requirements.

The main entrance hall leads to an inner hall, and to the wide main staircase, of easy gradient. Three fast passenger lifts are being installed to communicate with all floors. Electric light will be installed throughout the building, with vacuum cleaning plant. Heating will be by low p sure hot water. Lavatory accommodation, with cont ous hot and cold water supply, will be provided on floor for both sexes of the clerical staffs, together separate accommodation for principals. Metal casem will be used for all front windows, and double-hung woo sashes for all back areas.

The general contractors for Astor House were W. F. F Ltd., of London. The sub-contractors were as follo Z. D. Berry and Sons, London (heating); Powers and De Ransomes, Ltd., London (structural steelwork); G. E. W and Sons, Maidstone (Portland stone); Waygood-Otis, L London (lifts); Harold Cooper & Co., London (lift gr and staircase balustrading); Crittall Manufg. Co., Brain (casements); Siegwart Fireproof Floor Co., Ltd., Lon (fireproof floors); Malcolm Macleod & Co., Ltd., Lon (artificial stone stairs); Luxfer Co., London (lantern li and pavement lights); Carter & Co., Poole (tiling); C Walker & Co., London (marble work and mosaic); Tho Faldo & Co., London (asphalt),

The general contractors for Aldwych House are J. Par son and Sons, of Blackpool, who are also responsible the floors. The following are sub-contractors: G. Sa and Son, Ltd., Nottingham (steel work), Stuart's Gra lithic Co., London (stairs); Bath Stone Firms, Lon (Portland stone); Le Grand, Sutcliffe and Gell, L Southall (well boring); Thomas Faldo & Co., Lon (asphalt), Davey Paxman & Co., London (boilers).

Hastings Music Pavilion Competition.

The awards made by Professor Adshead, the assessor, in the competition for a music pavilion at Hastings, are as follows:—

1. Messrs. C. C. Voysey and H. T. Morgan, 88 Gower Street, London. (Premium £150.)

2. Messrs. T. B. Bell and F. Kennerell Pope, 75 High Street, Weston-super-Mare. (Premium £100.)

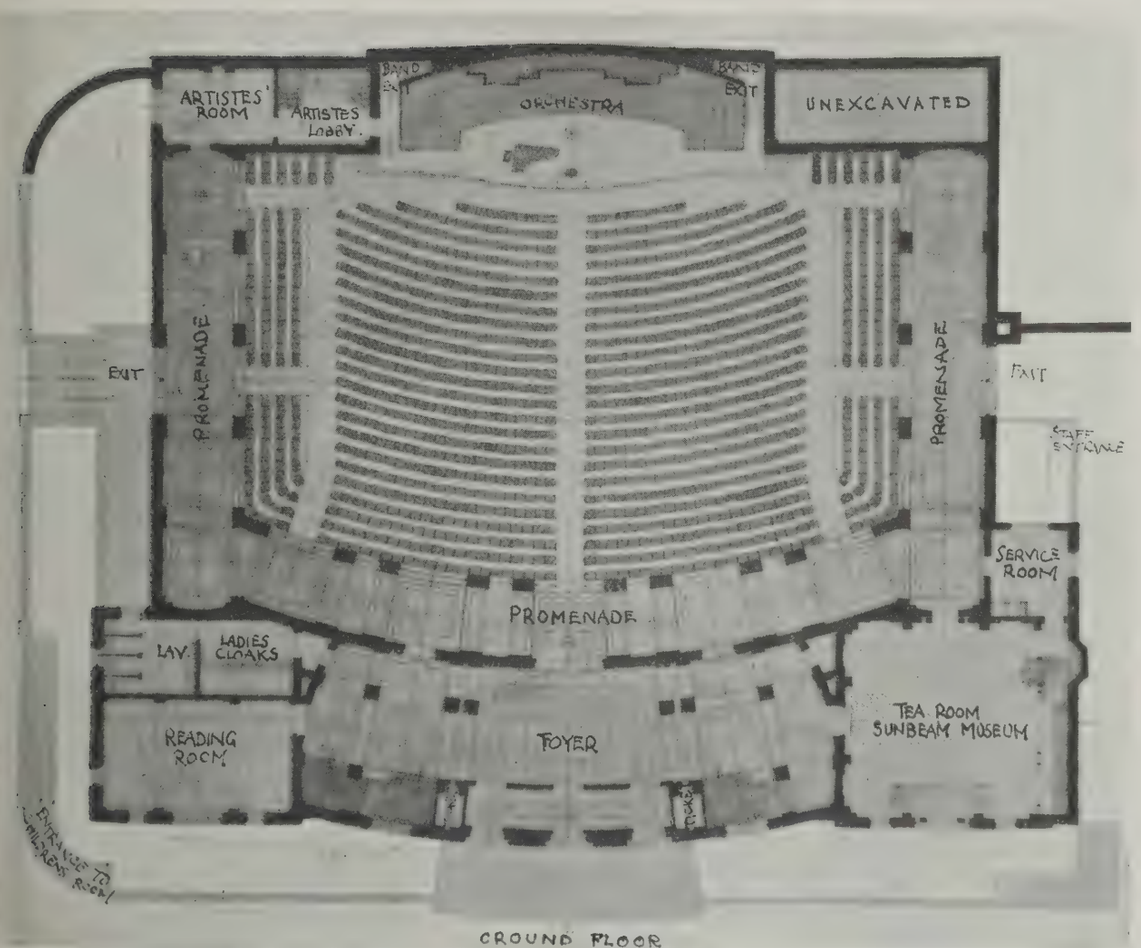
3. Messrs. A. E. Richardson and C. Lovett Gill, 41 Russell Square, London. (Premium £50.)

Forty-four designs were submitted, but about the winner of the competition there can be no question. The best known architects of the day entered, and though some were original here and there, none achieved that simple attractiveness in design which distinguishes the conception of Messrs. Voysey and Morgan. The conditions of the competition were difficult, not because they were "many and various," but because they were few and vague. The promoters of the scheme appeared to be uncertain about what they really wanted, nor did they lessen the difficulty of the task when they stipulated that the cost must not exceed £60,000. Some of the competitors frankly said this sum could not possibly cover the cost of the pavilion, and designed Pavilions-de-luxe according to their own idea of how they should look; but Professor Adshead, grinning remorselessly, as one can imagine, cast them upon the rubbish heap, ultimately selecting a design which is about as effective for the money as anything could be, and demonstrating the obvious but neglected principle that simplicity and economy are the essence of beauty.

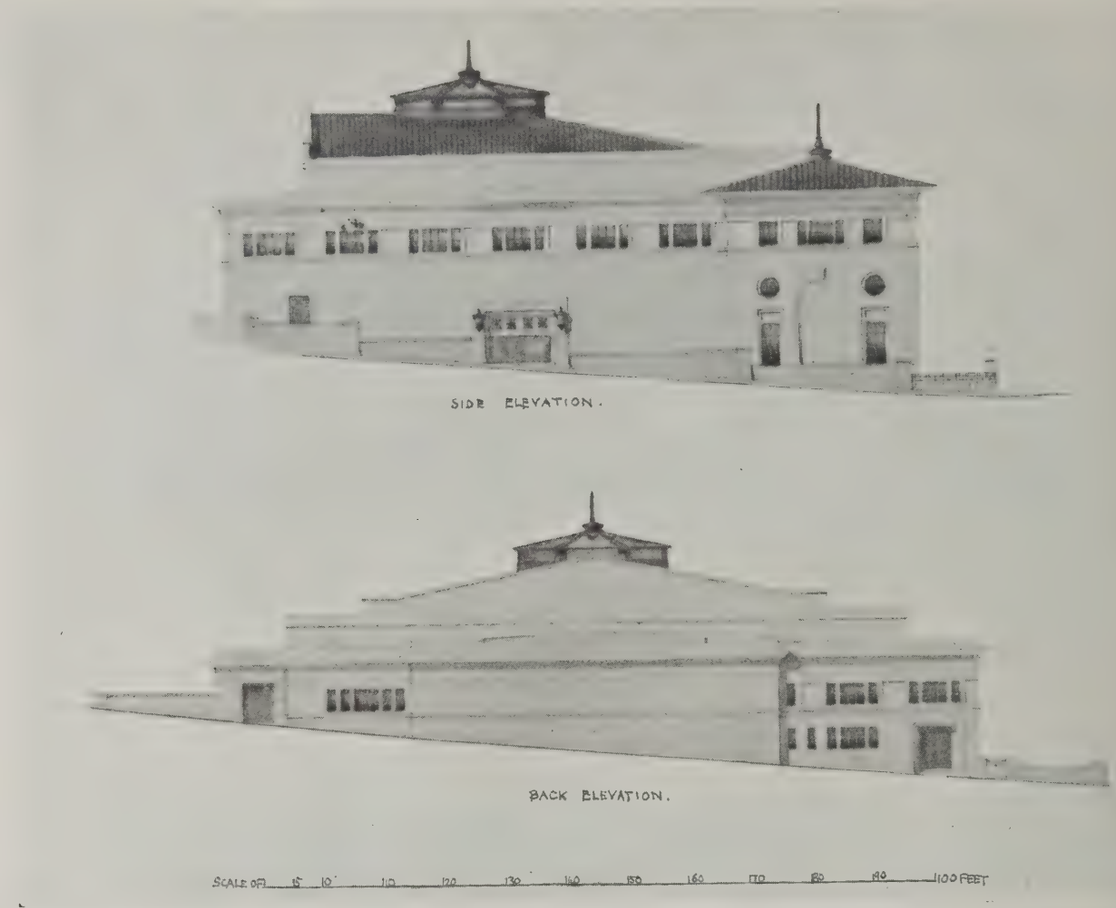
The estimated cost for Messrs. Voysey and Morgan's design totals £59,919. Of this £34,128 would be spent on the Concert Hall, £7,394 on the construction of the basement, £3,000 on the boundary walls, and £15,397 on the remainder of the building. The main entrance leads into a foyer 25 ft. broad, which in its turn conducts into the Concert Hall, round which runs a promenade 10½ ft. wide. On one side of the foyer are lavatories and a reading-room, which has a separate entrance of its own; on the other side are the tea rooms and Sunbeam Museum, which occupy two stories, and have also a separate entrance. Where the mummies or Indian relics (or whatever museum comprises) are to be put remains a mystery, what with windows and entrances, etc., there appears be no available wall space against which to place the ca At any rate, it seems a morbid idea to make the quick through the ritual of a feast surrounded by relics of dead.

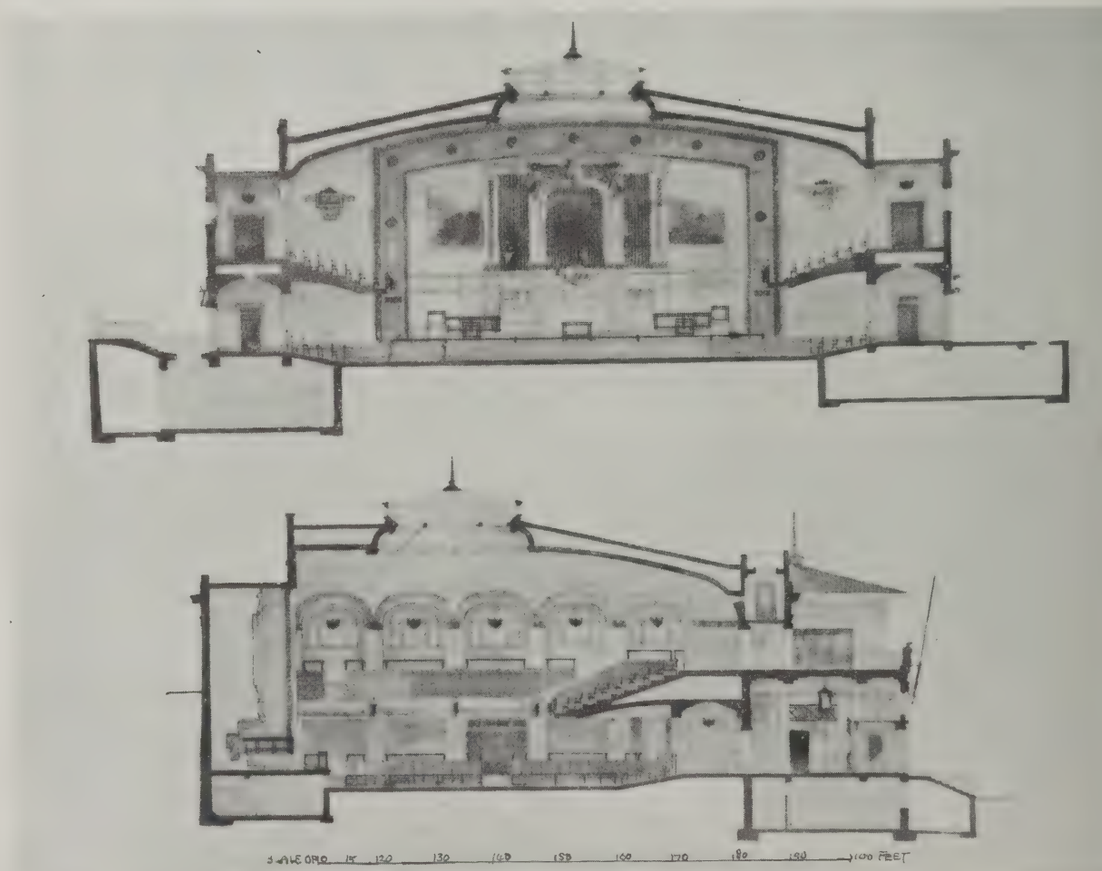
The area of the concert hall is 15,370 sq. ft., and its se ing capacity 2,024; but with a full house, judging by plan, quite a large percentage of the audience would be able to obtain a glimpse of the stage at all, or if at at an angle so acute as to render comfort impossi Another questionable point lies in the length of the row seats, which in some cases contain twenty-two stalls compared with the fourteen allowed by the L.C.C. Ha panic, of course, such rows would act as death-traps; the real objection to them lies in the objection of the dec early-arrivals to standing and to being trodden upon wh the late-comer blunders into the centre of the row. Th shape of the concert hall in this design, nevertheless pleasant. It does not link happily with the two little bo each side of the foyer, but it is simple, uncomplicated; the is a feeling of space, and the lines seem to have some sy pathy with the shape of the site. This is not by any mea the case with some of the other designs, notably with set placed third. The planning here is in certain respe brilliant—even, perhaps, too clever—but the shape of concert hall makes one wince when one compares it wi the outline of the site. The jangle of forms is extremely displeasing, while the succession of little rooms follow round the left-hand side of the auditorium, looks le nothing so much as a dog's tail wagging in the air. Th plan, however, takes advantage of every inch of grou allowed, whereas the designers of the winning plan inclined to be prodigal of their land. There is a good d of country each side of the building, set to no useful pu pose except that on one side it affords an extra exit. does not even allow of the coal cart getting up to the boil house. The boiler-house is, of course, in the baseme

(*Continued on page* 205)



HASTINGS MUSIC PAVILION COMPETITION: FRONT ELEVATION AND PLAN OF FIRST PREMIATED DESIGN.
C. C. VOYSEY AND H. T. MORGAN, ARCHITECTS

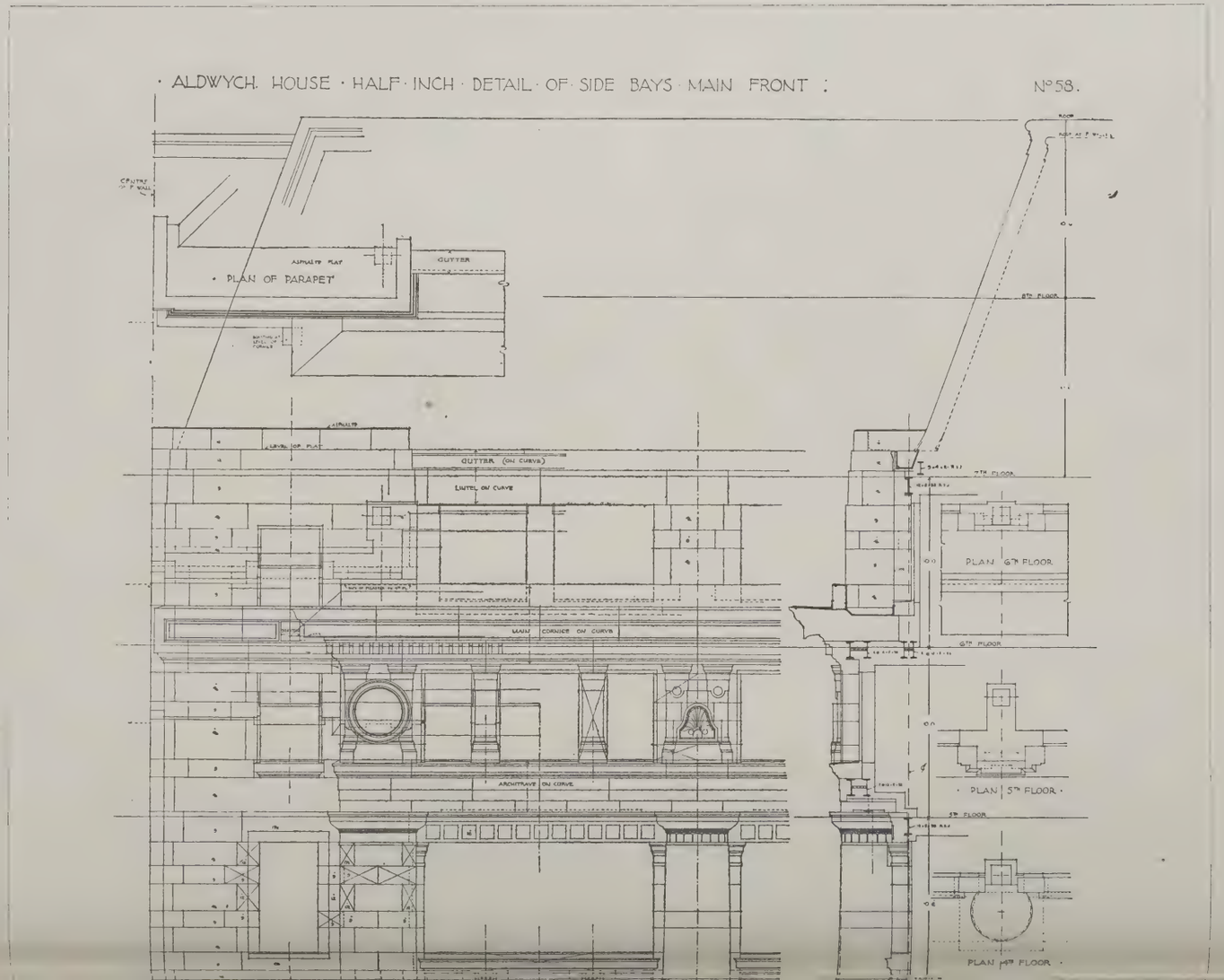


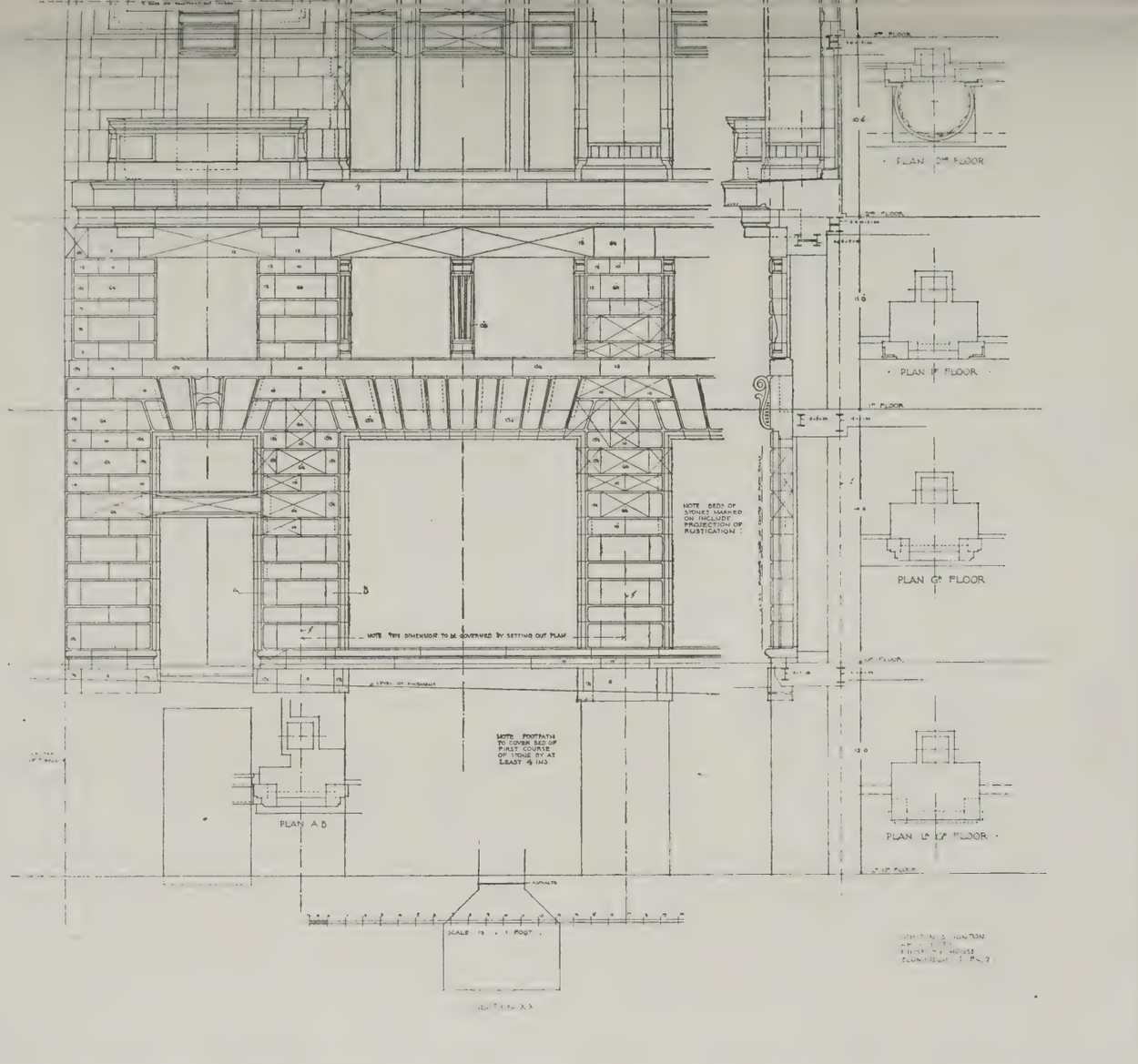


HASTINGS MUSIC PAVILION COMPETITION: FIRST PREMIATED DESIGN.
C. C. VOYSEY AND H. T. MORGAN, ARCHITECTS.

Architects' Working Drawings. 50.—Aldwych House, Aldwych, London : Detail of Elevation

Gunton and Gunton, F. and A.R.I.B.A., Architects





Aldwych House, now in course of erection in Aldwych, has a frontage of about 213 ft., and covers a ground area of some 30,000 ft. super. Architecturally it is conceived on modern classic lines, a big order embracing three of the eight floors being employed.

(*Continued from page* 198.)

also contains caretakers' rooms, a children's lecture , a band room, and a chair store, all of which rooms ccavated round the concert hall, not under it. Under re are no excavations.

the ground floor, in addition to the concert hall, foyer, rooms, and reading-room, are service, artistes' and stra rooms, while on the first floor, besides the balcony, seats 700 people, is the Sunbeam Museum, lavatories, menade, and a covered loggia. The auditorium is d by a lantern and by a sort of clerestory that is one most attractive features in the design; for externally clerestory forms a frieze of windows, which gives the elevation its distinction. It affords the right anima- to what might otherwise have appeared a neglected on of the composition. On the front elevation this effect is suggested—no more. To have continued it d have been to run the risk of monotony.

Messrs. Voysey and Morgan, indeed, have paid a good of attention to ventilation. In addition to the frieze indows, other openings are introduced behind the tors in the promenades. There is also an extract duct een the ground and the first floor promenades connected a fan chamber between the ground and the first floor ce room, a similar arrangement being made over the floor promenade. By this means impure air is drawn from the centre of the hall, leaving a clean atmosphere he projection of films.

In the plan of Messrs. Bell and Pope, of Weston-super-Mare, who were awarded second place, the point of chief interest lies in the side-tracking of the concert hall, which allows of greater space for the children's lecture room. The reading-room here looks to be rather uncomfortably placed, and the main elevation has not even simplicity to commend it.

Messrs. Richardson and Gill, who were placed third, have turned their concert hall at right angles to the entrance, thus making it long and narrow, which does not seem to be an advantage. The broad, shallow hall is not only more beautiful, but is more practical in every way, and possess finer acoustic qualities. Their front elevation shows surprising originality, and the idea of an outside promenade on the roof of the entrance hall is rather fascinating; but the steep outside staircases each side of the entrance, while giving the building a French gaiety and sprightliness, make it so restless that one cannot look at it with ease at all. Beethoven or Handel would knock the roof off a place like this, and if anybody played a Jazz all the *motifs* would start to dance.

On the whole this is an interesting competition. If in the planning there is nothing brilliant, the fault can be put down to the promoters rather than to the architects. The City of Hastings at any rate should be proud of the compliment paid her by the architectural profession in its interest in her affairs, and should ignore those "civic fathers" who complain that the winning design is "dull."

The R.I.B.A. Studentship Drawings

A Criticism

By JAMES BURFORD, A.R.I.B.A.,
Director of London University Atelier

ubject for the Soane Medallion is a University Centre with a Hall of Convocation containing a Hall to hold 2,000 persons, Lecture Room for 1,000, Senate Room, etc., and a group of six Faculty Buildings, the former to be considered in Detail.

HOUGH going a journey may be a simple matter, the finding of the right road to start on may well ie our wits. And so it comes that sident with the experience of travels ick upon him sets out awry and, hristian in his Progress, falls into ough of Despond. It is well if there de standing by who will draw him nd set him upon sound ground, and m go on his way.

It a composition to retain its title s be a unity is a truth sometimes . It must have some chief point terest—some Focus amplified and by all other parts of the design.

know I there is a God in Heaven? use the Angels have a Master rely."

ust that reason for the less that pro- the greater, that domination of iary parts by a Central Idea, for its magnification, that forms the or- on of design. If a line be drawn and er crossing it a design is begun. Point of crossing is the centre of st—whatever is added must in- its importance, as a retinue gives y to a king, or a stage crowd pro- ce to the chief actor.

s with these words, and some that , we would temper our congratula- to Mr. A. J. Brown on his winning Soane Medallion and Studentship. ever the intention of the composi- the effect is this: that one design ys the other, for the main axes, should have crossed, run parallel. Here is the student not three paces gone on his journey and tearing downhill to Destruction. With what care must we pick our way on setting out: like Agag of old, walking delicately. As it stands, the Hall has two entrances of an equal importance, for what the one gains by its frontal position the other achieves by its Court of Honour. Had the plan been turned through a quarter arch, that the right side became the entrance front, and the part that now holds that duty banished, there would have been one axis through the building contrasting with the other through the Faculty "Place," and the exits and the entrances of the Lecture Hall could have been direct from or to that spacious court. And thus the design would conform to the wise saw—"Keep your axial lines direct and simple."

On the right road at last ('tis a narrow one), a critical examination of some minor faults would be an edification. We will speak with authority, for we have, in our time (tell it not in Gath), committed them all.

Do not obstruct communications. To negotiate the side-pass from the front of the Main Building to the "Faculty Place" requires more brilliance in the steering than is shown in the planning, while the egress to the playing grounds commends itself as an encouragement to athletic practices. Once in those Elysian fields the sight of the Academic Pile is bisected by the tower—itself an anti-climax. On the design of the Lecture Room we would put an extenuation and a condemnation. How fine would the Professor think himself in the spendid isolation of this great corridor! But, oh, how tired his pupils when, and if, after Ulyssian wanderings, they reached their goal! "The greatest happiness for the greatest number" is as true of planning as it is of statecraft.

We fear that we have torn the design to a thing of shreds and tatters, yet we have sought to do our patching in the manner of the Oysters, and add a pearl for every rent we made. And with so elegant an apology we beg leave to let fly our parting shot, that the plan may be less mixed than our metaphors. The parallel spaces apparent in the front vestibule are not adopted in the best designs, and a jarring note is struck, in the same part of the Composition, by the sudden transition from the widely spaced piers of the Entrance Hall to the closely-knit columns of the façade. For a suggestion of a better way we would refer Mr. Brown and any of our readers, who have perused us so far, to M. Garnier's Prix de Rome Plan for 1899.

Mr. T. E. Scott, whom we congratulate on his gaining of the certificate of Hon. Mention, saves himself a deal of trouble by the isolation of the Lecture Room. With the decks thus cleared for action he might well hope that all would be plain sailing, but no, he founders on the rock of a plan-form always difficult to handle. The many axes of the octagon and the promise they give of an easy tying of the minor parts to the dominant motif of the plan but spread a net in which many a student has been ensnared. Eschew the

octagon as you would the octopus, their tentacles will land you in unpleasant complications. The elevations form a satisfying grouping, but the convoked would wish a sacrifice of height to the benefit of hearing.

It has been said by a person more exact than explanatory that if the plan is right the elevations will be in the same blessed state. It is true. But, when designing, think not of the plan alone. From the first hesitating tremble of the pencil to that last triumphant flick of the brush that throws the drawing into a scintillating brilliancy, think of your building as in it, on it, up it, down it, through it, vertically and horizontally, above it, below it, and make your own this mental acrobatic property which is the peculiar monopoly of architects.

The design marked by a golden diamond shows a good massing of the principal parts of the elevations, though the roof lines of the side wings destroy the height of the central portico. The large scale drawing displays a certain heaviness of detail, but the balloon-shaped balusters above the portico may be intended for an alleviation. The plan is weakened by the angle entrances, and in some other respects reminds us of a remark on the Period of Edward VII—that it proudly wore its sanitations outside. In Monumental planning put the chief motifs in the right place, and let them proclaim their position; never let the minor attributes forget their secondary importance.

Mr. W. J. Knight is to be congratulated on the brilliant set of drawings with which he wins the Owen Jones Prize for Colour Decoration. The decorations of San Vitale, Ravenna, is a harmony in blue, green, and gold, contrasted by streaks of red, as Mr. Knight shows with a fine technique and a clean handling of tonal values. The rich colouring of the early Christian churches glows as with the fire of a Faith undimmed. The winged angels and stiff painted saints are animated by a simple spirit to which, as nothing was impossible, nothing was conventional. If we could yet believe in angels he could picture them without self-consciousness. This we say to proclaim that Mr. Knight has given us no dead thing. His work is in harmony with past ideals, and breathes that spiritualization of the old pagan philosophies which was the peculiar mission of the Early Church. And as we linger beneath the dim storied vaults we feel an affinity with the forgotten painters sleeping in the drowsy tombs.

The design for the colour decoration of a commercial building shows more pains in the making than hope of success in realization. To a large scale the multiplicity of small patches of varied colours would tend to combine in a tint neutral to them all—much in the way that painters of the Impressionist School build up a hue or tone by raw pigments laid side by side. The grey light of this country favours, for an outdoor use, tints of a medium strength. Crude tones or values will remain crude, for we lack the intense sunlight that harmonizes the vivid colours of the East.

Mr. Ridley, the second competitor, has less surety of touch, a less subtle sense of harmony and contrast. A rich colour must make its effect by a foil of sober hues. This is paralleled in the paradoxical truth that in painting, and in sculpture, architecture, literature, music, a high light is gained by increasing the size and depth of the darks. Mr. Ridley is at his best in the representation of texture in his drawing of the fresco at Cromwell House, Grinstead.

The Grissel and the Henry Saxon Snell Prizes have not been awarded, though a certificate of Hon. Mention is given in the latter Competition to Mr. K. H. Read. He treats a quiet design for an Asylum for Aged Poor in the traditional manner of the stone counties of England, but he mars his conception with some ill-contrived detail.

We have travelled in company as far as our space will allow us. If so be that we have helped our victims to an understanding expression of an architectural idea, our reward is great. Yet they who give are ever doubly blessed, and thus the critic takes the larger spoils of gratitude. And so we make our bow and leave you. *Absit invidia.*

Following is the official announcement of awards:

The Soane Medallion and £150 for Design.—The subject set for this year was "A Central Group of Buildings for a Modern Non-Residential University." This prize was awarded to Mr. Alfred John Brown, Welwyn Garden City, and a certificate of Honourable Mention to Mr. Thomas E. Scott, A.R.I.B.A., London.

The Owen Jones Studentship.—A Certificate and £100 for Ornament and Coloured Decoration awarded to Mr. W. J. Knight, A.R.I.B.A., London.

The Henry Saxon Snell Prize and £50, for the design and construction of hospitals, convalescent homes, and asylums—"An Asylum for 200 Aged and Infirm Poor" was the design subject for this year. It was found impossible to award the prize this year, but a certificate of Honourable Mention and £5 were given to Lieut. K. H. Read, A.R.I.B.A., Aldershot.

The Grissell Gold Medal and £50 for Construction.—The subject was "A Mooring Mast for an Airship." The Air Ministry have shown the greatest interest in this competition, and Major G. H. Scott, C.B.E., A.F.C., was detailed to assist the jury in assessing the award. Major Scott was in charge of the mooring-out experiments carried out under the Comptroller-General of Civil Aviation at Pulham. Some interesting designs were submitted in the competition, but it was decided not to award the prize. The subject was a very involved one, and it was found that a competitor who had a grasp of his subject from an architectural point of view had failed to satisfy the demands of modern aviation, and vice versa.

The R.I.B.A. Essay Silver Medal and 25 Guineas.—This is awarded for the best essay on a subject of architectural interest which may be chosen by each competitor. It was decided that the prize could not be awarded this year, but that a certificate of Honourable Mention should be given to Mr. Herbert J. Harding, A.R.S.A., London.

The competition drawings are on exhibition in the Galleries of the Royal Institute of British Architects, 9 Conduit Street, W.1, up to February 6, 1922, between the hours of 10 a.m. and 8 p.m. Saturdays 10 a.m. to 5 p.m. Admission is free.

Competition Awar

Paisley War Memorial.

Sir Reginald Blomfield, R.A., ha the following awards in the Paisl memorial competition—First (£25 Robert Lorimer, A.R.A., Mrs. M Williams, sculptor. Second (£20c Ernest G. Theakston, F.R.I.B. London, Mr. S. Nicholson Babb, sc Third (£150): Mr. Harold Tar F.R.I.B.A., of London, Mrs. M Williams, sculptor. (For list of Cc tions Open see page xxvi.)

Exhibition at Aust House.

An interesting exhibition of Aus products and manufactures was by the High Commissioner on Janu Australia Day.

Speaking at Australia House, the exhibition is being held, Sir explained that its main object bring home to Englishmen the character of Australian develo Not only were agriculture past mineral developments going forwar manufactures were also making strides.

Going on to the subject of emig the speaker emphasized the fact Australian capital was only sufficie support Australians, but for I manufacturers who could introduc capital and labour there were eno possibilities and unlimited markets exploited. Window-glass and lin were among the products partic needed.

The exhibits covered a wide rang particularly attractive were native bers and marbles.

Coming Events

Thursday, February 2.

Concrete Institute.—Annual Din the Savoy Hotel. 7 p.m.

Saturday, February 4.

Architectural Association. — S visit.

Monday, February 6.

The Surveyors' Institution.— Forestry Directorate in the United dom during the War." By H. A. chard, Chief Technical Officer to Assistant Commissioner of the For Commission. 8 p.m.

R.I.B.A.—President's Address to dents. 8.30 p.m. Presentation of and Studentships.

Tuesday, February 7.

Liverpool Architectural Associati "American Departmental Stores." Mr. Austen Hall, F.R.I.B.A.

Wednesday, February 8.

Manchester Society of Architec "The Architect and the People." Mr. A. S. Hope, F.R.I.B.A.

Industrial League and Council, Ca Hall, Westminster.—"Industrial Uni By Professor A. W. Kirkaldy, M.A.

Edinburgh Architectural Associati "Foundations." By Mr. J. W. Ar of H.M. Office of Works.

Professor Rothenstein on Architectural Draughtsmanship

Monday, January 23, Professor Rothenstein addressed a meeting of he R.I.B.A. on "Architectural ıtsmanship" (Mr. Paul Waterhouse, 3.A., in the chair).

is an alarming meeting, and I am alarmed at addressing it, began ;or Rothenstein (who didn't look ıst bit alarmed.) I am also a ırprised at finding myself here. I e as a result of an accident. It is that a painter should be address- :hitects on draughtsmanship, but ısked to come some time ago when te was in the irresponsible future, e makes promises of this kind some eforehand, in the hope, perhaps, the long meanwhile somebody will ıll about it, or that an earthquake 'uenza will intervene. I confess ıe matter had escaped me until 'ays ago. But here I am.

you should ask a practical painter to you on draughtsmanship is, s, an indication of how little we ıbout one another. This is much :gretted.

'he great past architecture and g were so closely allied that each contributory factor to the other, e exponents of our arts knew each nd worked together. There were 'ho, like Michelangelo and Peruzzi, in themselves great painting and architecture; and now it should)od to maintain this friendship and hetic knowledge of each other's The painter learns the value of re, and the architect finds the that lies in the play of light and ver the face of a building.

cannot be dissociated, we are g to the same ends and, with this in mind, I have of late been at some architectural drawings perspective drawings), and it has d to me that architectural draw- affecting a manner which we do erstand.

y the architects in many things, chief is in his privilege of using quare—of his ability to draw the raight line. It appears, then, that ıitect wishes to forsake this great e in an effort to make his drawing and to give it "feeling," and in so ıe beauty of line has given place e emotionalism more akin to bad g than good draughtsmanship. hitect, it seems, is striving after ng which he no doubt feels the would applaud; as a matter of ıe painter, that is the young of whom we hear so much, is ıg to the true draughtsmanship ırchitect, to the greatest severity ıer. This is more in the mental of this generation. The new ion of thought is towards economy ession; to get at something of thematical truths underlying our nd, no matter what we may he fashion of our own day is the e of all that has gone before.

comes as something of a surprise in some drawings that architects are trying to do the "Doggy" thing in art, and in so doing are dangerously inclined to miss that scholarship and that quality of proportion which are essentially theirs by heritage. Many of the best artists were brought up as architects, and this early training has given their work a great quality of structure rarely held in that of others. I greatly regret that this was not so with me.

It is in this knowledge of structure underlying the thing that he draws that the architect scores. His sense of the attributes of the material gives him the advantage. Why then should he want to lose all this to make a pretty display on paper?

I expect that you know all about this. But I can only pretend to give the ordinary views of a painter after he has seen a few modern architects' drawings. The drawings I have looked at lately I know are not your best drawings. I speak only of those which I have seen, most of them in the various architectural papers. The architect's main work I know is in the making of plans and in the administration of the art of building. But when he comes to make a drawing of the building as it is going to be, he should draw it as if he had complete faith in it; he should draw every moulding stone and detail as if it was standing before him in all its reality.

I do not want to use the past to belabour the present, but I will illustrate my point with some pictures of drawings by great architects of the past. If there was one great thing in the art of a Botticelli or a Crivelli, it was that they had such absolute faith in the things that they drew. If it was a railway station or post office they would put it there as they saw it, without any effort to make it beautiful.

It is unfortunate that people should care so little for building that they should want to make it picturesque. Good, simple building is something that we love; it is rarely, if ever, without beauty. There is nothing which gives me greater pleasure than to stand before a great building which Nature, in the fullness of time, has made her own, to note every detail, to count every stone, for when I draw a building I count the stones. It would not be fair to the building otherwise. There is nothing so fine as the quality of an old moulding; to draw a moulding carelessly is to me an unnatural offence.

I would appeal to architects never to set aside their God-sent instrument the T-square. To keep ever in mind the clear beauty of the swift, straight line and the sense of power of expression that lives in a clean, articulate line drawing.

Professor Rothenstein then showed some lantern slides of drawings culled from various architectural magazines—English, French, German, and Italian.

PROFESSOR ROTHENSTEIN AT THE R.I.B.A.

Discussion

Sir Reginald Blomfield, who was to have moved the vote of thanks, was unavoidably absent, and the following letter from him was read to the meeting:—

"I have no luck with the R.I.B.A. meetings. This time I am not allowed out at night, owing to a cold, and I am disappointed that I shall not be able to move a vote of thanks to Professor Rothenstein as invited by the Council. I am sure he will say a lot of interesting things, and he speaks with all the authority of wide experience and his own admirable draughtsmanship. As, however, he has the unusual faculty of speaking from rough notes or nothing at all, and I can't be there to hear him, I have no idea what he is going to say, and instead of being able to select choice positions for my guns, all I can do is to put in a little casual sniping.

"This matter of draughtsmanship and architecture is familiar to many of us. There have been competent architects who were poor draughtsmen, but the majority of good architects have also been excellent draughtsmen—Bramante, Peruzzi, the elder Sangallo, De L'Orme, Inigo Jones, Perrault, and most of the great French architects. In England Cockerell, Burgess, Devey, Street, Waterhouse, my uncle, Norman Shaw, were all good draughtsmen, and my own view is that it is difficult, if not impossible, for a man to be a great architect who does not possess the skill of his fingers which enables him to get his ideas on to paper without the handicap of clumsy and inadequate expression.

"The Frenchmen of the end of the seventeenth century had no doubt on the subject. The founders of the French Academy in Rome insisted on draughtsmanship as the basis of design, and Blondel repeated this in the following century; but by draughtsmanship they did not mean the catch-penny tricks of the ateliers, the washings and sprayings into which the architectural drawing has degenerated in France and America, and

I regret to see in recent years in England. They meant sound, accurate, tenacious draughtsmanship which shirked no difficulties, which was determined at all cost to get the thing right. They did not differentiate between the drawing required by the painter and that required by the architect. For both they insisted on a thorough training in drawing, not only for its value as a means of expression, but also as an essential gymnastic to develop in the student a sense of form and the power of discriminating between those subtle shades and nuances which mean all the difference between right and wrong in design. I think more attention should be paid to pure drawing in our schools from this point of view, that is, as a means of training the æsthetic and critical senses.

"But from this point forward painter and architect part company. The painter pursues his drawing for its own sake as his actual means of expression, it is the complement and co-equal of his idea; but with the architect drawing is only a means to an end. It is not his final means of expression, merely a stage on the way to the realization of his idea in actual materials. The mistake too often made in our schools is to confuse the means with the end. The care lavished on the wonderful drawings produced in competition is to the architectural mind dead waste of time, for the thought that should be given to the design is given to its presentation on paper. Stripped of the recognized devices of the modern architectural draughtsman, there is too often little left, and a draughtsman might remember the remark of Burgess, who said of an eminent colleague that it was a pity he couldn't build his cross hatching. I may warn our younger brethren that experienced assessors are not taken in by these devices; what they want are straightforward geometrical drawings which show the design honestly and without any flourish of trumpets.

"Architectural illustration has, I regret to say, been so largely superseded by the short cut and the plausible look of the photograph that one seldom sees it nowadays. Photographs are generally misleading as to scale and many other points, and line drawings are much the most satisfactory form of illustration. I find that in one of the first Arts and Crafts Essays written about thirty years ago, I suggested 'the line used in architectural illustration should be free, accurate, and unfaltering, drawn with sufficient technical knowledge to enable the draughtsman to know when he can stop. The line should not be obstinate, but so light and subtle as to reflect without effort each thought that flits across the artist's mind.' I still think that is the sort of drawing to aim at. Knowledge and understanding of what he is drawing is of course essential. It is given to few to draw architecture correctly by sheer accuracy of vision. Sargent did it in his Ruins of Arras Cathedral, but then Sargent is a consummate draughtsman. For most of us there is but one road—incessant labour to correct our views, train our hand, and perfect our critical appreciation of form.

"Please convey my regrets to Professor Rothenstein that I have missed his address."

Mr. Chalton Bradshaw, who proposed the vote of thanks, thanked the speaker for his suggestive and enlightening paper. He pointed out that the perspective drawing was the least architectural of all the architect's drawings. Planning was more essentially the architect's work, and that his elevations and plans were more characteristic.

Professor Gerald Moira said that the reason for the perspective was no doubt the difficulty that architects had in getting their clients to understand elevations. He said that the drawings of Robert Adam and Soane were simple, straightforward elevations.

Mr. Theodore Fye said the architect and the painter look at draughtsmanship from different points of view. The artist looks at his picture as an end in itself. The architect's drawing is only a means to an end. The reason why architects put figures in their drawings is perhaps because they feel that their buildings are rather forlorn things and they want humanizing in some way. There was the other and very practical reason that figures give scale to a building.

Mr. Edward Warren said, although it more often happens that the great architect is also a great draughtsman, there were one or two notable exceptions; for instance, our greatest architect, Wren. That Wren could draw there is no doubt. A short while ago I was privileged to see some letters of Wren's, and they were illustrated throughout with many clever and even humorous sketches. As to the architect's drawings, the working drawing or half-inch detail was in many ways more essentially architectural than any other drawing.

Mr. Paul Waterhouse, P.R.I.B.A., said the architect's drawing has to serve a double function: it has to please the client and instruct the builder. On an architect's drawing a line occurs where something advances or retires; it indicates two ideas; it is not always fair, and it is difficult in expressing texture.

Professor Rothenstein, in reply, said: The main theme of my talk to-night was simply this: that I admire the architect very much, and I a little deplored that he should admire some of us. But I would ask you to admire the best.

F. E. T.

Unification and Registration

Many and divergent were the views expressed at a general meeting of A.R.I.B.A.'s convened last week to discuss a report prepared by the Associates Committee on the all-important subject of the day.

Where so many conflicting interests are clamouring for consideration a unanimous decision is hardly to be expected, and those responsible for the proposals formulated in the document under discussion had to withstand bitter opposition from a certain section of those present. It was obvious, however, that a genuine desire to arrive at a conclusion satisfactory to all parties animated the meeting, and it was good to see a broad view-point and statesmanlike policy emerge triumphantly from the initial confusion.

The main subject of controversy was the suggested new constitution of the R.I.B.A., under which architects would for a time be admitted to associateship under conditions somewhat easier than those which have ruled hitherto. This relaxation is, as was clearly s absolutely essential if all outsiders be brought into the fold of the R. It was agreed some months ag amalgamation was the first step to tration. The precise terms of that gamation are the immediate diff An Associate is naturally inclin guard his hard-earned diploma so jealously; but a compromise h believe, been arrived at by whi title is fully protected, while a multiplicity of labels is skilfully a

The general public cares little precise initials that follow the arc name, but it will soon learn to app the difference between the pract who is guaranteed by his Institu the free lance who can offer no tials of any description. In devi means whereby the door of the R may be opened to all serious and e comers A.R.I.B.A.'s have made step forward.

Royal Institute of Architects of Irelan

A council meeting of the Royal tute of the Architects of Ireland ha held at 31 South Frederick Dublin, on January 16, under the manship of the president, Mr. O'Callaghan, F.R.I.A.I. There we present: Messrs. H. Allberry, J. H. F. Hayes, R. C. Orpen, F. G. Hick Lynch, S. M. Ashlin, L. F. Giron, chelor, T. J. Byrne, R. M. Butler, Byrne, G. P. Sheridan, A. E. Murr G. F. Beckett, Honorary Secretary

Mr. H. Allberry, F.R.I.A.I. unanimously elected vice-preside the present year, and Mr. T. J. was appointed to take his plac member of the Council. The fo Committees were appointed: sional Practice, Examination, Art lication, Ancient and Historic Bu and Housing of the Working Class the following were elected repr tives on Joint-Committees: Iris construction—Messrs. F. Batchelor Byrne, and W. Kaye-Parry; B Materials—Messrs. R. M. Butl Hayes, and P. J. Lynch.

The procedure adopted by the dent of the R.I.B.A. with regard appointment of architects for t posed Parliament Buildings for N Ireland was again considered, and action in the matter was decide The question of Unification and tration of architects was und sideration.

The following were appointed present the Institute on the newly Board of Architectural Edu Messrs. R. M. Butler, L. F. Giron Leask, P. J. Lynch, R. C. Orp Kaye-Parry, J. H. Webb, togeth the President, Mr. Lucius O'Cal and the Honorary Secretary, Mr Beckett.

The question of the use of the military barracks around Dub housing was considered, and the was referred to the Housing Co for report. It was decided to h Annual Dinner at an early date Committee was appointed to de the matter.

Correspondence

Sir Charles Ruthen's Charges against Architects.

o the Editors of THE ARCHITECTS' JOURNAL.

s,—The attention of the Council of .I.B.A. having been drawn during eeting held on Monday, January 23, e address recently given by Sir s Ruthen, it was resolved that ity be given to the following reso- s in reference to the grave charges nsinuations contained in that ad-

That, regarded as the utterance of President of the Society of Archi- this Council considers that it has adequately and appropriately dealt by the Council of the Society.

If it may be viewed as the utterance Government official, the opinion of Council is that it is an undignified ture from the best traditions of the Service, as well as an unwarranted from an official quarter upon a profession whose interests the .A. is pledged to protect, and those her authority are invited to give deration to it.

That though the charges are so al, and expressed with so much is as to be unworthy of serious ion, the Council, in view of the fact hey were the utterances of a Fellow e Royal Institute, has called upon harles Ruthen either to present to Council such definite allegations as nable it to take its own proper n or to tender a complete with- ul.

IAN MACALISTER, Secretary.

the Editors of THE ARCHITECTS' JOURNAL.

S,—In the course of his recent ss to the Society of Architects, my Sir Charles Ruthen has seen fit on the shoulders of the unfortunate ects the chief blame for the failure tional Housing Policy. As one who e housing question and social better- very much at heart, I do not regret controversy in the Press which s attention on these matters and e architects' special contribution to At the same time I feel that the e of Sir Charles Ruthen's remarks, he wide publicity which has been to them, are so unfortunate as to to grave misapprehensions unless re combated.

rôle of candid critic is at all times nkless one, but plain speaking is a valuable asset, particularly between ers of the same profession at such as these. It is not the courage or spokenness of Sir Charles to which uld take exception if his charges be substantiated. It is because I e those charges to be unfounded t take up my pen in an endeavour wer them.

ng wise after events is an exercise we all enjoy, and the task of find- apegoats for what has admittedly a National failure to rise to a great tunity is now a popular occupation. personally quite prepared, both as zen and as an architect, to take my hare of blame for lack of foresight. But when it is definitely stated that architects have been among the chief sinners in the matter of profiteering, and that they have allowed their zeal for art to run away with their discretion, I can only say that these accusations are, in my opinion, entirely wide of the mark. In the first instance, the "scheme" was initiated by the Ministry of Health. Their officials laid down the lines which were to be followed as regards plans and specifications. They even went further than this, they issued model plans and specification, the latter being one of the least satisfactory documents with which I have ever had to deal. In so far as architects have endeavoured to incorporate in the work entrusted to them some amount of architectural fitness and design, both as regards lay-out and elevations, surely they were only doing what they were paid to do and what their clients and the public expected them to do.

Sir Charles is, I think, labouring under the not unusual delusion that architecture costs more than the mere "building." My own experience almost leads me to believe that the exact contrary is the case. I have had it proved frequently that well planned, proportioned, and designed houses do not cost more than stock designs in which architecture is conspicuous by its absence. My own practice for many years—even before the recent housing boom—has been almost entirely concerned with housing and domestic work, so that I am speaking from actual experience. Those of us who have been engaged in the intricacies of getting houses erected during the last three years will, I feel sure, agree that after going through the various stages of Government supervision, council approval, and tenders, the opportunities for indulging in expensive designs and "art" in the conventional sense, even if one desired to do so, have been negligible.

The pity of it is that so few housing schemes have been designed by architects. Take South Wales for instance. I think I should be right in saying that 80 per cent. of the schemes in that area have been carried out by municipal surveyors and engineers. These schemes, far from being the cheapest, as one might be led to believe, are, to say the least of it, not among the most economical in cost. I think it is quite possible that in some cases isolated schemes may have been entrusted to inexperienced architects and to those whose ideas of design were extravagant in the early stages. These cases are entirely outnumbered by the large number of other cases where architects have given of their best in the matter, not only of design, but of professional skill and of technical ability with regard to cutting down costs.

One has only to walk about in any part of the country to experience a sense of disappointment, not that the houses have been over-designed or that they suffer from an excess of "art," but that in the process of erecting them during a specially difficult time they have been cut down to a bare minimum of accommodation and design. T. ALWYN LLOYD.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Sir Charles Ruthen's extraordinary address to the Society of Architects on the 13th inst., in which he charged architects with being responsible for the failure of the Government Housing Schemes, has naturally raised the indignation of all architects, whether they have been engaged in the carrying out of housing schemes or not.

We challenge Sir Charles Ruthen to find any house erected in South Wales under the Ministry of Health that shows the slightest appearance of an architect's pencil "run wild in the dream of the artistic home." On the contrary, the poor appearance of the majority of these houses, caused chiefly by the restrictions of the Ministry of Health, has brought unjustifiable criticisms on the architectural profession.

Sir Charles further said that the "State had a right to expect the fullest assistance from all those who were fitted by training to help . . . in the great housing effort," and that "the State did not get this assistance." The South Wales Institute of Architects has repeatedly urged from the very first that the services of those "fitted by training to help," viz., qualified architects only, should be engaged.

Sir Charles Ruthen knows better than anyone else how seldom this has happened in South Wales, and on behalf of the members of the South Wales Institute of Architects we strongly repudiate his most unjust remarks against his own profession.

H. C. PORTSMOUTH, President.
IVOR P. JONES, Hon. Secretary.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The Director-General of Housing was surely not serious in his suggestion that the failure of the National Housing Scheme lies at the door of the architectural profession. Such an attempt to saddle the profession with responsibility for the uneconomic policy of the Ministry of Health is too obvious. The scheme has failed from self-evident financial reasons.

When National Housing was launched with the full weight of the Government behind the scheme local authorities were instructed to erect wholesale "Homes fit for Heroes" in the shortest possible time. The fact that the necessary materials and labour were not available to carry out the scheme at such short notice was not at first very seriously considered. In consequence, local authorities, under pressure from the Ministry of Health, competed with one another to obtain the necessary labour and materials for their cottages, and so the inevitable happened, the old law of supply and demand came into operation, and the prices of the eagerly sought components of the houses rose by leaps and bounds.

Sir Charles Ruthen's suggestion that the adoption of steeply-pitched gables and other little architectural features brought about the collapse of the Great Housing Scheme is too absurd to be

taken seriously. Gables certainly were largely adopted, with the approval of the Ministry, to enable the levels of main roof-plates to be kept low to economize bricks and give variety to the elevations; but the expensive little artistic features referred to by Sir Charles are chiefly conspicuous by their absence in cottages designed for local authorities by competent architects who have not too closely adhered to the extravagant model specification issued by the Ministry.

The cost of the actual cottages is admittedly high and uneconomic; but, taking into consideration the abnormal conditions under which they were erected, it has become apparent that in many cases cottages to comply with the Ministry's requirements could not, under the conditions existing, have been built for less. In fact the settlement of many final accounts has shown that in numerous cases the builders have received a very small profit on the net costs of the cottages, whilst in several cases they have lost on their contracts.

A minor cause which contributed to the cost of the cottages in certain districts was the agreed price contract system which was practically forced on some local authorities by the Ministry, and which contract, by eliminating competitive tendering, undoubtedly, in some cases, raised the cost of building.

Now the public are authoritatively informed that the failure of the scheme is the fault of the architectural profession!

C. B. WILLCOCKS.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—As architect to two housing schemes I should like to express my resentment of Sir Charles's attack as being entirely unfair and without foundation.

The real facts of the matter have been already so well stated in the Press, that I only wish now to refer to Sir Charles's statement at the close of his reply to the discussion on his address. He there himself calls attention to the fact that the houses are now being built on the same site, from the same plan and specification, for the same architect, and by the same builder, for a sum within £25 of half the cost a year ago!

Is not this the crux of the whole failure of the National Scheme, and does not this very fact, which is now the general experience throughout the country, exonerate architects from the charges which Sir Charles has been at such pains to attack them with?

J. ARTHUR SMITH, F.R.I.B.A.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Sir Charles Ruthen should have remembered that "those who live in glass houses should not throw stones." The Ministry of Health left the architect very little scope. It prescribed the accommodation, drafted the specification and form of contract, bought the bulk of the materials, and regulated the rates of wages to be paid.

Had the points been dealt with by business men much good would have resulted, but the accommodation scheduled was far more than the average working man can pay rent for or furnish, the specification was so poor as to entail a heavy burden on the rates for future repairs had it been adhered to, form of contract D88 had to be withdrawn as unworkable soon after issue, the materials supplied were often faulty and much had to be condemned, and the rises in wages were out of all proportion to the output obtained.

The National Housing Scheme was financially unsound from the commencement, and was undoubtedly undertaken as a political measure to help tide over the gap between the end of the war and the reorganization of trade. Having served its purpose in this way, but proved to be as great a financial disaster as the war, it now has to be scrapped, despite the still very urgent need for houses, and a reason had to be found for scrapping it, and also a scapegoat, hence Sir Charles Ruthen's speech, which I trust will cost the present Government every architect's vote when next they go to the country.

JOHN HAROLD KENNARD, F.R.I.B.A.

Hot-water Heating of Workshop

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—My attention has been drawn to the reply to "Set Square" published under "Enquiries Answered" on page 107 of your issue for January 11.

The point raised by your correspondent is one of considerable importance to those interested in the subject of central heating. It is all too frequently asserted that the successful installation of a gravity system of low-pressure hot-water heating necessitates sinking the boiler below the level of the radiators, or pipe-coils; and further, that the distributing pipes cannot be "dipped" or "lifted" below or above doorways and other obstructions. In consequence, many architects and would-be users of this system are constrained to adopt other methods or to incur considerable incidental expense in excavating boiler-pit and pipe-trenches.

Particularly does this often apply in residential heating. Existing buildings having solid floors and without basement are frequently considered to be unadaptable to central heating. This prejudice, arising no doubt from an improper understanding of the fundamental principles of hot-water circulation, requires to be overcome if we in this country are to share the advantages of central heating so much enjoyed—and talked about—by our American and Continental confrères.

May I suggest that the reply to your correspondent tends rather to cor than dissipate this unfortunate p dice? "Set Square's" proposed out is, to my mind, entirely satisfac and I am at a loss to find reasons fo assertion that the circulation woul either noisy or sluggish. The hea water above the doorways is s immaterial. Is it not the "circulat head or pressure set up by the differ in density between the several pos and negative vertical columns w determines the velocity of circulat Accurate computation of these colu indicates that the return pipes over doorways could be lifted to a level higher than that of the flow pipe, i quired. Provided air-pipes or air- are fitted at all high points (to relieve air accumulations which will natu form, at whatever level the boiler is situa the series of "lifts" over the doors c in fact, be extended indefinitely, so l of course, as the total "travel" of circulation does not exceed the limit i by the pre-determined temperature di ence between flow and return at bo and the corresponding carrying capa of the distributing pipes.

If proper consideration is given to t factors, it is difficult to see what ad tage could accrue from sinking p below the doorways, or setting the bo lower.

The drawing reproduced shows example of a simple lay-out heating hot-water supply service to a small This illustrates the importance of a pr understanding of the principles of water circulation, and the advant which it effects in respect of fac of installation, minimizing incide builder's work in cutting away, absence of "dead" main pipes.

F. BROADHURST CRA

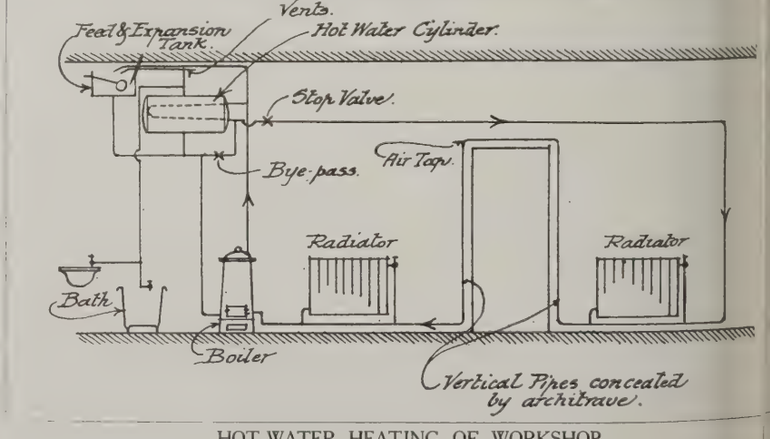
R.S.I. Congress at Bournemouth

To the Editors of THE ARCHITECTS JOURNAL.

SIRS,—As recording secretary of Engineering and Architecture sectio the Royal Sanitary Institute Congres be held at Bournemouth from July 2 29, I shall be grateful of offers to papers or initiate discussions in con tion with the hygiene of buildings.

A. SAXON SNEL

9 Bentinck Street, London, W.1.



HOT-WATER HEATING OF WORKSHOP.

Enquiries Answered

Cost of Bungalow.

.. writes: "It is proposed to erect in ollowing materials a bungalow, ring about 15,000 ft. cube, in a country town about one mile from vay station: walls of two 3 in. con- slabs with cavity, plastered inside ugh-cast outside; roof covered with es; floors of wood boards laid on te; standard metal casement win- and plain joinery. Good sand and can be had near at hand. What you consider a probable price per be for erection during the summer year?"

almost impossible to name a figure able to the coming year, but it is hoped that substantial drops in and materials will shortly make more stable. Personally I should to pay double pre-war prices dur- 22, but after all it is a pure specula-

F.S.I.

nd Pressure on Elevated Tank.

P. writes: "In your explanation to D. on page 786 of your issue for ber 28, the wind pressure equals er sq. ft. on a surface normal to its on. In Fig. 1 the total pressure P = *pbh*. In Fig. 3 the total pres- in my opinion, will be P = *pbh* sin 45 s. The normal pressure on each $_2 = pbh \sin^2 45$ degrees = P sin 45 s. This normal pressure again d acting in the direction of the $P_3 = P_2 \sin 45$ degrees = $pbh \sin^3$ rees. On two faces $2P_3 = 2pbh \sin^3$ degrees. You calculated $2P_3 = 2pbh \sin^2 = 45$ degrees. Will you tell me where I made a mistake?"

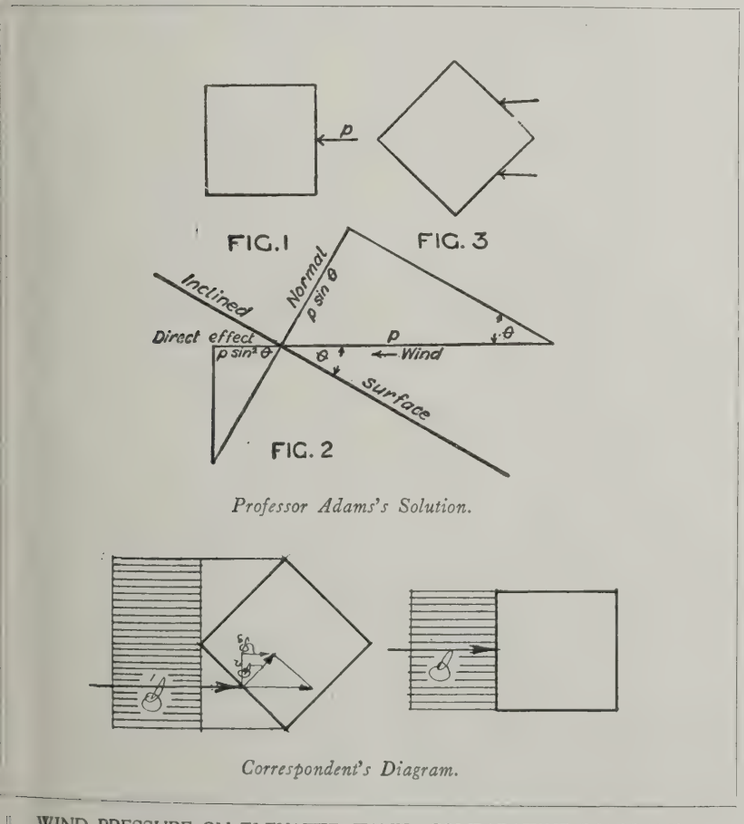
—The matter cannot be stated plainer than it has been in the reply to A. E. D. The mistake this new correspondent makes is at the start where he assumes the oncoming wind to have the force of *pbh* sin 45 degrees instead of simply *pbh*. It is only after the wind strikes the inclined surface that it is resolved into the two directions, one slipping off and the other giving sin θ as the pressure normal to the surface.

HENRY ADAMS.

Damp Patches on Plaster.

A. S. writes: "About twelve months ago I converted a stable and outbuildings into a house, with very satisfactory results. The only trouble I have had, however, is that since the beginning of the winter large damp patches have broken out in different places on the plaster, both in new and old work. I have carefully considered the matter, and as there is a proper dampcourse, and as the trouble occurs in different rooms under a variety of conditions, I am at a loss to account for the trouble. I shall be glad to know whether there is any known cause for plaster sweating in small areas of the same room and not generally. I may say that the job was completed in the early spring of 1921, and I naturally concluded that with the very hot summer, and the fact of the house having been inhabited since March last, the place would be by now quite dry."

—Apparently the damp patches are the result of moisture percolating through the walls from the exterior of the building. Should this be the case our correspondent should try spraying the exterior walls with a liquid waterproofer.



Professor Adams's Solution.

Correspondent's Diagram.

WIND PRESSURE ON ELEVATED TANK: COMPARATIVE DIAGRAMS.

End of Brick Control

According to General Housing Memorandum No. 59, just issued by the Ministry of Health, the following arrangements have been made after negotiations between the Ministry and the Federations or Associations of Brickmakers:—

(a) Contracts to be cancelled.—As from January 31, 1922, all contracts made by the Department of Building Materials Supply for the supply of bricks for housing schemes will be cancelled.

(b) Existing Delivery Orders. — All orders placed by the department for the delivery of bricks to particular schemes will remain operative until January 31, and will then be cancelled so far as they have not been executed by the despatch of bricks from the works on or before that date.

After January 31, local authorities or their buidling contractors will be free to make their own arrangements for the supply of bricks. It is hoped that this procedure, under the conditions now prevailing, will facilitate a reduction in the price of bricks for housing.

Under the form of contract in use by local authorities, any reduction due to a fall in the price of bricks below the D.B.M.S. schedule price will be treated as a variation in the cost of materials, and the contract price of the houses will be varied accordingly.

Care should be taken by local authorities to secure that the maximum reduction on schedule prices is obtained; and in dealing with the final cost in the assisted housing account the department will require to be satisfied that payments have not been made in excess of ruling market prices.

Fashion and Style

Sir Lawrence Weaver, lecturing on Fashion and Style at the Manchester University, spoke of the way in which English building had developed traditionally up to the middle of the eighteenth century. Then, he said, an unfortunate thing happened: Horace Walpole was born. Walpole started a "fashion" in architecture—a very different thing from a style. He invented "Strawberry Hill Gothic"; he looked at abbeys and tombs, and thought they would make nice houses and coal-scuttles. It was a turn-back from a tradition which was growing, in order to pick up and reopen a tradition which was dead.

The Renaissance, indeed, had been a turning back to an old tradition: to the classical tradition; but it was a real movement of the human mind responding to the intellectual development of those days. It changed the current of tradition in this country into something just as real and representative of the human mind of the time as Tudor work had been.

Sir Lawrence spoke of Eden Nesfield and of George Devey; but of all those who had given a right impetus to the domestic architecture of to-day he regarded Philip Webb and Norman Shaw as the chief.

The lecturer showed many pictures of houses designed by Webb and Shaw and their disciples, and pointed out that alongside the study of traditional methods there had gone on a study of the technique of old work. Most domestic architecture to-day derived either from Webb, characterized by a traditional use of material,

or from Norman Shaw, characterized by a care for design. Sir Edwin Lutyens combined the virtues of both schools; his remarkable art was a blend of tradition and invention. Sir Lawrence showed a series of pictures, tracing the development of Sir Edwin Lutyens's work from its early exuberance to the later period of reticent grace still enlivened with fancy. For all his faithfulness to tradition, said Sir Lawrence, Sir Edwin Lutyens impressed his work with personal quality. It was precisely because he used his power of artistic surprise with reticence that he never became antic. He never collapsed, as grave designing was apt to do, into dullness. His humour relieved great conceptions by enchanting accessories.

The lecture formed the second of a series on "Modern Domestic Architecture" which have been arranged by the architects of the city and the Institute of Builders, working in conjunction with the University.

Law Reports

Right to Appeal—Interesting Point

The King v. The Minister of Health. Ex parte Rush.

Jan. 19. King's Bench Division.
Before the Lord Chief Justice and Justices Avory and Roche

This matter came before the Court in the form of a mandamus calling upon the Ministry of Health to show cause against a rule made to hear an appeal under the Housing Acts 1890 to 1919.

The Attorney-General, Sir Gordon Hewart, K.C., and Mr. Bowstead, instructed by the solicitor to the Ministry of Health, showed cause, and Mr. E. A. Harvey, K.C., and Mr. Martin O'Connor, instructed by Messrs. Edmond O'Connor & Co., supported the rule.

Mr. Bowstead stated that the Paddington Borough Council executed certain work of repair in default of work by the owner of the house at 17 Stonbridge Park, Paddington. They intervened because the house was not fit for human habitation. The owner, Mr. W. B. Rush, appealed to the Ministry of Health against the demand by the Borough Council for payment for the work executed, viz., £134 15s. 10d. The Ministry had refused to hear the appeal on the ground that Mr. Rush had no right of appeal, but Mr. Rush contended that the Housing Acts and the Health Act, 1919, gave him the right of appeal. Counsel contended that under the circumstances of this case, and having regard to the housing problem, the owner had no right to appeal, and the Ministry therefore refused to entertain it.

Mr. Harvey said at one time the landlord had a right to say that he would shut his house up, but nowadays, under the 1919 Act, a local authority had to say whether they would not repair the place for human habitation whether the landlord liked it or not, and the landlord's protection was that he could appeal. Instead of lessening such a right, the Act increased it. The statute gave the local authorities wider powers, and it would be monstrous if landlords had no right of appeal. That right was either to the Ministry of Health or to Quarter Sessions, but not to both.

The Lord Chief Justice, in giving judgment, said they had to consider whether the interpretation of the Act as construed by the Ministry of Health was correct, and the Court came to the conclusion that the Ministry's interpretation was not the correct one. His Lordship admitted that the Housing and Town Planning Acts were a complete puzzle and extraordinary legislation. It would be a most extraordinary thing if a person had no appeal in such a matter as this. The rule would therefore be made absolute and the Ministry of Health would have to hear the appeal.

Justices Avory and Roche concurred.

Surveyor's Report

Economic House Drainage and Repairing Co. v. Harrington.

Jan. 19. Official Referee's Court.
Before Sir Francis Newbolt.

This was an action in which the plaintiff company, whose registered offices are at 147 Marylebone Road, sought to recover in the first instance £980 7s. 9d. from the defendant, Mr. Thos. J. Harrington, of 4 Edith Grove, West Brompton, being the balance of a charge of £1,295 for building work done and materials supplied in respect of a house in Molyneux Street, Marylebone. The defendant disputed the claim, alleging that the charges were excessive, that the work had been negligently performed, and that there had been delay in carrying it out, for which he counterclaimed.

Mr. Pitman appeared for the plaintiffs, and Mr. Melville for the defendant.

Mr. Pitman, stating the plaintiffs' case, said that off the original claim the defendant had paid £315, and the balance had been the subject of an action under Order 14, the result of which was that he had paid another £500, so that the amount in dispute was £480. When the parties came before the Referee it was suggested, and the parties agreed, that an independent surveyor should go into the matters in dispute and report the result to the Referee. Mr. Gilbee Scott was accordingly appointed by the parties, and that gentleman had made his report, and the result of that report was that the account had been reduced by £176. With that result the defendant was not satisfied.

Mr. Melville said, in answer to the Referee, that the defendant was unable to accept the surveyor's report as final because he thought he was entitled to a much larger reduction.

Mr. Scott was called by the defendant and examined by Mr. Melville as to the details upon which he had arrived at the conclusion set out in the report. He said that he had gone minutely into all the facts, had read all the letters, had examined the time sheets of the workmen, and had heard what the parties on each side had to say before arriving at a decision.

Mr. Harrington, the defendant, gave evidence as to the manner in which the work had been done and the times at which the carpenter had been absent from the job, in consequence of which, he said, the other workmen could not get on with the work, and the completion of the work was in consequence delayed. The painting, he said, had been so badly done, both as regards the interior and exterior, that repainting would be required at a cost which he estimated at £72. The delay had prevented him letting the house, the annual rent which was £65. One lady was anxious to get it and had offered £ year with a premium of £100.

The Referee said that in every inst except one Mr. Scott had reporte favour of the defendant, and in rega the delay had allowed him more th quarter's rent. He (Mr. Scott) had s eight days on the case, and knew e sheet and every document connected it.

In the result Sir Francis gave j ment for the plaintiffs for £303 17s with costs.

Book Reviews

An Architect's Price Book.

The recent marked decrease in the of labour and materials augurs wel a great revival in building, and reasonable to hope that much of the w involving many thousands of pou held up in all parts of the country, will be begun. It is inconceivable that cl will still withhold contracts and run risk eventually not only of "flood industry, but of "cornering" many o materials, the supply of which w become unequal to the demand. I book under notice, which has now rea its forty-eighth edition, the whole o prices have been revised and broug up to date as possible. Among the important features are cost of buil rough approximate estimates, cu rates of wages, constants of labour materials, preliminaries, taking d removing and credits, prices, and hir cost of builders' plant. Mr. Youn achieved a high standard of acc under exceptional difficulties.

"Spons' Architects' and Builders' Pocket Price 1922." Edited by Clyde Young, F.R.I.B.A. P E. and F. N. Spon, Ltd., 57 Haymarket, London

Converting a Business into a Pr Company.

There appears to be a great de ignorance as to the precise advantag be gained by the conversion of a bus into a private company, and the proc necessary to carry it through. Pe the one advantage with which ever is familiar is that such a conversion l the liability of the proprietor; but obvious item of information, given by is not unlikely to cause mild irritati those who have accumulated a reaso reserve to enable them to tide o period of trade depression.

This brochure shows the effect conversion. Although the subje dealt with in the compass of eight pages, it is doubtful whethe point that requires elucidation has ignored. A clear explanation is giv the various steps to be taken fro time the owner has arrived at a de to form a company until the holdi the statutory meeting, it being necessary subsequently to file a returns and certain other docum according to the circumstances typical case is taken, somewhat elaborate than usual, the object be cover as much ground as possible, s the procedure in any particular cas be known.

"Converting a Business into a Private Compa Herbert W. Jordan. Price 1s. net. Messrs. and Sons, Ltd., Chancery Lane, W.C.2.

Latest List of New Inventions

Latest Patent Applications.

4.—Brown, A. E.—Reinforced concrete walls. January 10.

1.—Kirk, R. H.—Method of constructing outer walls of bungalows, &c. January 9.

6.—Loman, R.—Method of erecting blocks of buildings. January 10.

6.—Macdonald, C.—Smoke flue terminal, cowl, or chimney-pot. January 14.

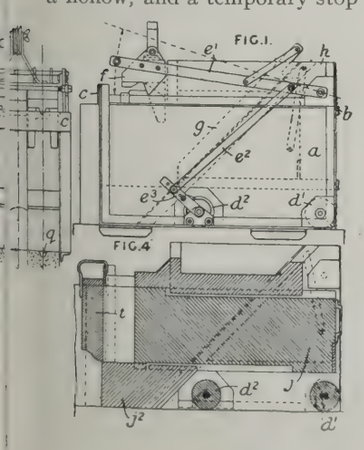
4.—Pope, P. A.—Building construction. January 12.

Specification Published.

1.—Shipwright, W. G.—Reinforced concrete floors for buildings.

Abstract Published.

0.—Moulding walls in situ.—Concrete Dwellings, Ltd., and Gray, P., 5 Great Winchester Street, London.—Apparatus for moulding solid or hollow concrete walls in situ comprises a tamper and mould which is moved backwards automatically by the action of the tamper. The mould is formed of side plates *a* of metal stiffened with angles and held at the requisite distance apart by cross-bars *b*, *c*, the latter acting as a screed-board. Rollers d^1, d^2 are mounted on cross shafts, and support the mould on the course already formed. One or both of these collars have ratchet teeth at their ends adapted to be operated at each lifting-stroke of the tamper *f* by pawl and lever gear e^3, e^2, e^1, and so move the mould along automatically. The tampers, which are operated by hand or power, have central projections to form keyways *q* in the concrete, and side flanges to consolidate the concrete. A sliding feeding-plate *g* is also operated from the lever e^1 to feed the material into position from the hopper *h*. For hollow walls a fixed core-piece j^2 is provided and a movable core-piece *j*, and the tamper and feed-plate are formed double. When a concrete tie is required between the parts of the hollow wall, the central core *j* is drawn back to leave a hollow, and a temporary stop plate *t* is then inserted in the wall hollow. The core is retracted by a spring as the mould moves along.



The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

The Cost of Cottage Building

The Building Research Board, one of the bodies established under the auspices of the Department of Scientific and Industrial Research, has prepared a very full and interesting study on the "Cost of Cottage Building." Building costs, it is shown, reached their highest point in Great Britain in August 1920, and remained at the peak until March or April 1921. Since then there has been a rapid fall, although certain building materials have been maintained at the inflated prices. This is particularly the case with those materials, such as cement, bricks, lime, and tiles, which are believed to be most completely under the control of rings or combines.

The attempt to impute high costs to the price of labour is met by the figures given in the report. In the construction of the ordinary parlour type of workman's house, bricklaying labour represents one-third, while the charge for bricks alone is nearly one-half of the total cost. Since these figures were compiled the labour cost has fallen, while the proportion represented by the charge for bricks is believed to have risen. The need for measures to deal with the combines controlling the price of building materials has evidently not abated even in the face of the general slump which followed the Government's abandonment of the national housing scheme.

Second Annual Furnishing Trades Convention

Preparations for the second National Convention are going on. It is proposed to vary the procedure this year by having two-hour sessions each alternate day, and Mr. G. D. Smith has very kindly arranged to place a suitable hall at the disposal of the National Council for the purpose. The sessions will be held from 3.30 p.m. to 5.30 p.m., with, it is hoped, a different chairman on each occasion, who will be someone prominently connected with the furniture trade, and a member of one or other of the Federations comprising the National Council. In this way it is hoped to obtain more adequate discussion on the various subjects which will come up for review than was possible in the one-day convention held last March.

It is proposed to inaugurate the convention by a ceremonial luncheon on the same day as the exhibition opens, followed by a brief formal opening session which will probably be devoted more to general than specific subjects.

All communications in regard to the convention should be addressed to Mr. H. E. West Taylor at 18 Finsbury Square, London, E.C.2.

"Rosso Antico": A Rare Red Marble

Percy C. Webb Ltd., of London, have in their possession some forty or fifty blocks of Rosso Antico marble—all that is left of a stone whose history is worth recording.

Although references to the white marbles from the Isle of Paros—the Parian marble—and Mount Pentelicus in Attica abound in classical literature, coloured marble receiving comparatively little attention, there is no doubt that Rosso Antico, in common with other coloured marbles such as Verde Antico and Cipollino, was used in the decorative schemes of the ancient Greeks. It was about 144 B.C. that Rosso Antico was first exported to the Roman Empire, and there, too, it played its part.

It was used for cornices and small mouldings. There are to-day two fine columns of this marble in the Rospigliosi Casino dell'Aurora; and the fourteen steps to the high altar of St. Prassede in Rome are also of Rosso Antico.

One can well imagine the satisfaction of the discoverer of this beautiful red marble. Had the Greeks in those days been blessed with newspapers they would certainly have announced a "valuable discovery at Mani"—Mani which is in the province of Laconia at the extreme south of Greece.

The Cape Matapan peninsula is actually the site of ancient Tænaron, and when Tibullus writes "What need have I of a palace supported by columns from Phrygia, Tenaris, or Carystus," and Propertius explains that "My house, it is true, does not lean on columns of marble from Tenaris," we may be fairly certain that both poets had the rich Rosso Antico marble in mind.

With the advent of the Christian era the fortunes of Greece began to wane, and afterwards the marauding Goths harried the land, and for the next few centuries turbulent history was made in the Grecian states. During this period the marble quarries were lost, and the land passed successively through the hands of the Turks, the Spaniards, and the Venetians, until the fourteen-hundreds, when the whole peninsula was invaded and conquered by the Turks. Again we have the Venetians and once more the Turks; then Peter the Great proposed, in 1724 or thereabouts, to free the oppressed States, but he did not live to carry out his plans. It was not until late in the nineteenth century that Greece became the Greece it is to-day.

The quarries were re-discovered and worked for a short time. The company that developed them erected cranes, brought quarrymen into the district, and expended a considerable sum in quarrying a large number of blocks. When the time came for shipping them the natives, who are practically uncivilized, interfered and made the matter impossible. The Greek Government was approached, and the King of Greece nominally purchased one of the blocks, and then claimed the lot as royal property. Just before dawn one morning a grey Greek gunboat steamed up and anchored off Cape Matapan. When it became lighter a cutter put off from the vessel, and an armed party of Greek sailors was landed. For several days the men took up stations while the marble was lifted and taken away.

The Week's News

Theatre Fire.

The Theatre Royal, Limerick, has been destroyed by fire.

New "Corner House" for London.

Messrs. Lyons are to erect a corner house at the junction of Marble Arch and Edgware Road.

The Murray-Smith Estate, Ramsgate.

The corporation are considering a proposal to offer substantial prizes for plans for laying out the recently acquired Murray-Smith estate.

Repair of St. Paul's.

A quarter of the essential work to preserve St. Paul's has been completed. Two of the eight piers are now saved, but work on the other six has yet to be commenced.

Memorial to Bishop Boyd Carpenter.

In Ripon Cathedral a two-light stained glass window in memory of Bishop Boyd Carpenter has been dedicated. The window has been designed and executed by Mr. J. N. Comper, of West Norwood.

Norman Font Refixed.

A Norman font, which was in 1853 found buried in the chancel of St. Sithney Church, near Helston, Cornwall, has been restored to St. Sithney, and refixed in the church.

Proposed Abattoirs for Johannesburg.

Plans for proposed municipal abattoirs have been placed before the Council, whose intention is stated to be to erect as a first instalment a cooling hall at an estimated expenditure of £3,500.

Memorial to Sir George Reid.

A tablet by Sir Bertram Mackennal, A.R.A., in memory of the late Right Hon. Sir George Houston Reid has been unveiled in St. Columba's Church of Scotland, Pont Street, London, S.W.

L.C.C. Housing Progress.

The L.C.C. Housing Committee, in a report, state that the number of houses on the Council's estates under contract on January 11 was 7,410; number completed, 1,325; in progress, 5,084.

Housing at Letchworth.

At Letchworth 20 houses have been finished during the month, making 197 finished during the year, and 295 in all. It is estimated that 31 more will be completed during January; 523 men are now employed on the schemes.

New Park for Brighton.

A new park is to be laid out on the East Brighton Estate to include fifteen tennis courts, four football or hockey pitches, two bowling greens, two cricket pitches, and a ground for organized games. This park is to cost £6,300.

Height of Buildings.

The Metropolitan Public Gardens Association have expressed a strong desire to preserve the amenities of existing open spaces by the prohibition in their vicinity of buildings of a height greater than that at present permissible.

Walvis Bay Cold Storage Plant.

The Cape Town Administrator has secured a loan of £3,000,000 which, it is reported, will be devoted to the erection of a cold storage plant and the improvement of the harbour works at Walvis Bay.

Acton Hospital.

In nine months the lowest tender for the extension of Acton Hospital has fallen from £23,000 to £17,984. The Hospital Council has decided to postpone the scheme for another nine months, believing that it will be possible to save another £2,000.

Burstall War Memorial.

A handsome war memorial window has been unveiled in St. Mary's Church, Burstall. It has been placed on the south side of the building, and comprises two lights. That to the left represents Joshua and the Angel at Jericho, and the other shows David sparing the life of Saul.

Demolition of Wooden Buildings.

A start has been made on the demolition of the "Embankment Annexe" of the War Office. This consisted of temporary wooden buildings erected during the war in the gardens on the Victoria Embankment between Horse Guards Avenue and Charing Cross Station.

National Federation of House Builders.

The National Federation of House Builders, which meets in Nottingham in the spring, will re-consider the question of subsidies on houses, and as a result of their deliberations representations may be made to Sir Alfred Mond on the subject.

Brighton Waterworks Improvements.

In view of the experience gained during the drought of 1921, Mr. James Johnston, the engineer of the waterworks, has advised the Corporation to extend the headings of the wells at the chief pumping station. For this purpose fresh sinkings will have to be made, at an estimated cost of £5,000.

Thames Improvement Scheme.

Alderman Francis, a member of the Thames Conservancy Board, in a report to the Kingston Corporation said that the additional revenue which the Board were receiving would enable them to begin the long-delayed repairs and improvements to the river, which it was estimated would cost £291,000 to complete.

The Government's Housing Intentions.

The Government's intentions with regard to the Housing Schemes are still veiled in mystery. All that is known is that of the 176,000 houses taken on by the Government, when Sir Alfred Mond replaced Dr. Addison, about 100,000 are already built; by the middle of the summer 150,000 will have been built, and by the end of the year probably the whole 176,000 will be standing. Whether the Government is going to aid in any way the building of the rest of the 500,000 houses is still utterly unknown. It appears to be very unlikely.

Bethnal Green Timber Stores Fire.

Damage amounting to about £4,
has been caused by fire at the premise
Messrs. Yates & Co., timber mercha
in Bethnal Green. A building of
floor, 75 ft. by 55 ft., used as timber st
and sawmills, was involved, and ab
one-half was burned out and part of
roof destroyed.

Lincolnshire Church in Danger.

After making an examination of
tower of St. Andrew's Church, Horbl
near Billingborough, Mr. Wilfred Bo
diocesan architect, reports that the so
east pier of the tower is on the move
in a very dangerous state. Crushing
the masonry is taking place, and if thi
not attended to soon there is a possibi
of the pier collapsing.

Is Architecture Neglected?

"The Genesis and Evolution of Ar
tecture" is the title of a course of lectu
which are being given at the York Se
ment during the spring term by Mr
Stuart Syme, Lic.R.I.B.A. The cours
intended not only as an historical sur
of the growth of architecture, but als
give students a working knowledge o
and the ability to appreciate it.

Civic Studies in Paris.

A body of teachers, social work
and other social students representing
Civic Education League (one of
societies associated with Loplay Ho
have spent a fortnight in the Fre
capital. The reception given by
French authorities was throughout n
cordial and helpful, and was felt to
of good import for the future relati
between the two countries.

Survey of National Coal Resources.

The Fuel Research Board have m
arrangements for the recognition of
Lancashire and Cheshire Coal Rese
Association as the local committee w
ing under the Board for the purpos
dealing with the physical and chem
survey of the coal seams in this a
The chairman of the committee is
Robert Burrows, and the director
research Mr. F. S. Sinnatt.

R.I.B.A. Conference at Cardiff.

The annual provincial conference
the R.I.B.A. will be held on June 9 an
at Cardiff. The organization of the
ference has been undertaken by the So
Wales Institute of Architects, an al
society of the R.I.B.A. Members
particularly requested to bear these d
in mind and to endeavour to keep th
free from other engagements so that t
may be able to attend the conferenc

Public Works in Batavia.

The Commercial Secretary at Bat
has notified the Department of Over
Trade that the Public Works Dep
ment has officially announced that
work temporarily suspended for reas
of economy is to be resumed immediat
The resumption of this work foreshad
a considerable demand for constructi
material and engineering accessories,
while no official authority has been gi
for starting on new works planned
would appear that there may be imp
tant openings for United Kingdom fi

ed in the above market and pro- It should be noted that in the contracts for material for public cables, constructional iron and nd the like, United Kingdom firms dge tenders with the Colonial t The Hague without the necessity l representation in Holland.

New Partnership.

rs. Harry Hooper & Co., land surveyors, architects, valuers, and ice brokers, of Billiter Square gs, are taking into partnership erbert J. Spooner, F.S.I., F.A.I., s been associated in the manage- f their offices for the past fourteen The business, which has been hed over a century, will be carried er the style of Hooper, Cushen & from the 1st instant.

London Sites for Sale.

ral large and highly important 1 prominent positions in central 1 are awaiting buyers. Among st notable are Devonshire House, lly; the freehold on which stood Tivoli Music-hall; and freehold 1 the corner of Oxford Street and Cross Road, which, running back s Soho Square, is covered with sub- l buildings, formerly the premises rs. Crosse and Blackwell.

M. Stefan Sinding.

with deep regret that we an- the death of M. Stefan Sinding, occurred at Paris. Of Norwegian ige, he studied abroad, particularly s, and, disappointed with his re- in his native country, settled in agen, where he wrought many of great strength and monu- beauty. His last, hardly finished, vas a memorial to the Danish rs killed in the war.

ar Memorial at Loughborough.

foundation stone of the Lough- 1 war memorial campanile has id in Queen's Park. Mr. Walter is the architect. The cost of the will be £10,000, the work being out by Messrs. William Moss and Loughborough. The carillon of ve bells will be cast at the Taylor ndry in Loughborough. The will necessitate a further expen- of at least £6,000.

Modern Craftsmanship.

ftsmanship and Modern Life" was ject of an address delivered under pices of the Charity Organization by Mr. J. C. Smail, assistant on officer of the London County , in Denison House. Lord Charn- resided. Mr. Smail said there was id there was opportunity for those ere in a position to exert their e to call for training in craftsman- every direction. Behind crafts- p lay character, and national er would be found to be closely to national craftsmanship.

Chelsea Arts Club.

novelties are in preparation for lsea Arts Club annual ball, which held in the Royal Albert Hall on Sir William Orpen, R.A., who is an of the decorations committee, G. Sherwood Foster, the organizer, gaged in devising and divining "brighter London 100 years hence," which is the period that is to be favoured at this year's ball. Tickets are obtainable from Mr. G. Sherwood Foster, 15 Queen's Gate Terrace, S.W.7.

L.C.C. County Hall Statuary.

The Establishment Committee of the London County Council announces that "Mr. Ernest Cole having intimated that he is not prepared to complete the seventh and eighth groups unless he is paid an additional sum of £1,000 over and above the agreed figure, we have caused him to be informed that the sub-contract must be considered to be at an end, and we have decided that no further payments beyond those already made shall be made to him for the sculpture work."

Masonic Institution for New South Wales.

A gift of £100,000 has been made to the Grand Master of the Freemasons of New South Wales by a Freemason to be used for the establishment of a Masonic Institution for boys and girls on the lines of the English institutions. Ground for the erection of a garden village has been purchased, and bungalows will be erected, each of which will accommodate twenty-five orphan children and a "mother," who will be the widow or daughter of a freemason.

Big Oxford Street Fire.

A serious fire has occurred on a portion of the premises of Messrs. T. J. Harries & Co., Ltd., drapers, milliners, and costumiers, of Oxford Street, W. The buildings affected were situated in Phœnix Yard, a narrow thoroughfare running between the two large blocks of business establishments of Messrs. Harries Ltd. They comprised structures of three and five floors, covering an area of 120 ft. by 80 ft., and it was on the first floor that the fire originated. The total loss will amount to many thousands of pounds.

Threadneedle Street Widening Scheme.

An arrangement has been made by the City Corporation with the London County Westminster and Parr's Bank, Ltd., for acquiring all interests in the ground required in front of Nos. 48–52 Threadneedle Street, for the sum of £40,000, together with a sum not exceeding £6,000 for professional charges, in connection with the scheme for the widening of Threadneedle Street, between Old Broad Street and Bishopsgate, to a minimum width of 33 ft. The London County Council has agreed to contribute half the net cost, not exceeding £27,500.

A Presentation to Mr. Stanley Miller.

English silver through many centuries has held the first place for beauty of design and sterling workmanship against the kindred crafts of the whole world. This pre-eminence has not passed from us; the service of silver for presentation to Mr. Stanley Miller, made by Messrs. Reid and Sons, proves that the standards, both of design and modern workmanship, are as high as ever. The salver bears the following inscription: "Presented by the Northern Counties Federation of Building Trade Employés to Stanley Miller, Esq., in appreciation of his able and devoted services to the Building Industry, and particularly as President of the Northern Counties Federation, 1919–1921. January 18, 1922."

A Dew Reservoir.

Several water engineers have recently issued warnings that in many parts of the country a serious shortage of water is inevitable this summer. Already in Bristol, Northampton, Boston, and many rural districts rationing of water has had to be introduced. Accordingly the dew reservoir for which Mr. S. B. Russell (formerly chief architect of the Ministry of Health) is applying for a patent has a special interest. Judging from the results achieved since early in November, a reservoir measuring a hundred square yards and costing less than £300 will collect 24,000 gallons of dew and rain in the course of a year.

Higher London.

Mr. Arthur Keen, hon. secretary of the R.I.B.A., in a letter to "The Times," states that the note from a correspondent in a former issue of that newspaper on the subject of the L.C.C. restrictions conveys the impression that the Council of the R.I.B.A. is in favour of increasing the maximum height of buildings in London from 80 ft. to 120 ft. He points out: "Emphatically this is not the case. The Council is opposed to any increase, but it feels that while buildings of 80 ft. in height are permitted, it is unreasonable, in view of the rapid development of fire-resisting construction and of fire appliances, to limit the height from the street level to the top floor of such buildings to 60 ft."

Definition of an Architect.

At a recent function Mr. Paul Waterhouse, P.R.I.B.A., said that his favourite definition of an architect was a man who was engaged at small expense to make cheap mistakes with a twopenny pencil on a fourpenny piece of paper, and to rub them out with a halfpenny piece of rubber to save his client making a £10,000 mistake on a £5,000 site. If they thought that over they would find it was the true essence of the architect's profession. As this was an age in which wisdom lay with the young, he asked the younger members of his family for a poetical similitude for an architect among builders, and a young voice suggested Daniel in the lions' den. A more apt suggestion would be a musical composer in the hands of an orchestral conductor.

Royal Sanitary Institute Congress.

A congress of the Royal Sanitary Institute is to be held at Bournemouth from July 24 to 29 next, under the presidency of Major-General the Rt. Hon. J. E. B. Seely, C.B., C.M.G., P.C., D.S.O., M.P. The arrangements include sectional meetings for the reading and discussion of papers, conferences, a health exhibition, and visits to places of sanitary interest. Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A., is president of the "Engineering and Architecture" section, and the recording secretary is Mr. A. Saxon Snell, F.R.I.B.A., of 9 Bentinck Street, Manchester Square, W.1. Mr. Saxon Snell would be grateful of offers to read papers or initiate discussions in connection with the hygiene of buildings. Health authorities have been invited by the Institute to appoint delegates to the congress. Application for tickets should be addressed to the Secretary, 9 Buckingham Palace Road, London, S.W.1.

Trade and Craft

Library and Office Desks.

An important sale of library and office desks is being held by The Shannon, Ltd., whose object is to promote the use of better grade equipment by throwing on the market a large number of different patterns of desks. Some hundreds of people will be able to secure bargains, and the new venture will undoubtedly prove a great success at all their branches, and particularly at the new showrooms recently opened at 57–9 Victoria Street, Westminster.

The Marble Columns in Wells Cathedral.

The Bryscom Quarries, Ltd., of Draycott, Somerset, have repolished the Bryscom marble columns in the westernmost wall piers of the nave of Wells Cathedral. There are four detached columns in all, 12 ft. high and 6 in. in diameter, each in a single piece. Two of these, it is said, belong to the original work—in other words, go back some six hundred years, while the remaining two were presented to the cathedral by the late Canon Meade about sixty years ago. The material for these columns was, of course, obtained from the quarries at Draycott long before they were worked by the present company, but it shows that in its own locality the possibilities of the material as a building stone and decorative marble have been appreciated for many generations. Before the columns were repolished there was at the height of about 4 ft. 6 in. from the ground on each of them a small patch where the original polish was retained intact, caused, it is believed, by visitors passing their hands over the material as they walk by. The columns now reappear in all the richness of their pristine beauty.

En-Tout-Cas Hard Tennis Courts.

Valuable information with regard to hard lawn-tennis courts, together with highly coloured plates and other illustrations of courts laid in this country and in America, is given in an attractive brochure just issued by the En-Tout-Cas Company, Ltd., of Syston, Leicestershire. The courts of the company have the approval and recommendation of noted players and authorities, and have met with phenomenal success not only in this country, but in America, Canada, and various parts of the world. Among the many advantages claimed for this method of construction are that the material being absorbent and porous the courts can be made perfectly level without a fall, and that the bound of the balls is virtually identical with that on grass, consistently maintaining the angle desired by the player. During the last twelve months 6,000 of these courts have been laid in the United Kingdom, and many repeat orders have been received, of which the more notable are for three more courts at Queen's Club, Kensington; ten at the Roehampton Club; and five more courts respectively at London Country Club and Hurlingham Club. The All-England Lawn Tennis Club, Wimbledon, have resolved unanimously to order En-Tout-Cas courts for the whole of the hard courts on their new ground at Wimbledon Park. The plates embodied in the brochure show the courts which have been laid out by the company at Port Lympne, Kent, for Sir Philip Sassoon; at Welbeck Abbey, Notts; and for the Duchess of Portland. The company enjoys the honour of "By Appointment to the King."

Silk Shades.

A very attractive catalogue has come to us from the Edison Swan Electric Co., Ltd., Ponders End, Middlesex, illustrating the endless variety of shades which they are able to offer to the electrically-illuminated portion of the community.

The importance of fittings in an architectural decorative scheme receives ever-increasing recognition, and here may be found a selection wide enough to gratify the most critical taste. The nicest requirements of colour, shape, period, are generously catered for, and for those who do not know what they want until they see it the catalogue will prove a veritable source of inspiration.

One or two coloured illustrations suggest alluring possibilities, and the innumerable reproductions in black and white demonstrate the fascinations of unexpected shapes and beautiful designs.

Especially noteworthy are the indirect dish shades, a somewhat novel development, we fancy, as regards silk, and the wood table standards on an adjacent page will have a particular appeal for those who are a little weary of the splendours of brass and nickel.

Two Electrical Innovations.

The General Electric Company, Ltd., of Magnet House, Kingsway, London, W.C., have sent us some interesting particulars of their Osram axial type lamps and the Kingsway automatic combined switch and plug. There are many special purposes where a concentrated downward light is required, and for these uses the axial type lamp is specially suited. In this lamp the filament is mounted at right angles to the axis, and the light is therefore thrown downward instead of horizontally. This intense downward illumination is enhanced by the use of an opal reflector which fits closely to the upper half of the bulb, and is held in position by a brass ring. With the opal reflector a 30-watt Osram axial type lamp gives a maximum of nearly fifty candle-power at angles up to 30 degrees from the vertical. Lamps of 30 and 60 watts are obtainable in all standard voltage ranges between 100 and 250 volts. The Kingsway automatic combined switch and plug—for the control of radiators, motors, banks of lamps, and other appliances which necessitate the use of a temporary connection to the mains—is claimed to be capable of dealing with currents up to 15 amps. without the slightest risk to the operator. Two patterns are supplied, one for surface fixing, and one for sinking flush in the wall or skirting board. Full particulars may be obtained on application at Magnet House or any of the provincial branches of the General Electric Company.

Colour Matching by Artificial Li

We have just received from M Holophane, Ltd., of 12 Carteret S London, S.W., an interesting pam dealing with the new Holophane for colour matching by artificial The Holophane daylight unit is a bination of the Holophane pris reflector with Chance's daylight which has been produced after long tific research and represents a r effort to obtain with accuracy, simpl and comparative cheapness the req correction of the gas-filled electric to a colour composition equivale daylight.

It is stated in the pamphlet that most all forms of artificial light are yellow, and colour sensations are th rendered less sensitive, thus maki difficult to see anything in its true c value. This yellowness is only prc appreciated by direct compariso artificial light with the pure whiten daylight, and is due to the lower tem ture of the sources of artificial lig compared with the higher temper of the source of daylight—the sun.

"In order to correct the light thus from an artificial source to the equiv of daylight it is necessary either t the proper amount of violet and etc., or to take away the proper an of red and yellow light, etc. A former method cannot be carriec satisfactorily, the latter course therefore be adopted, and light mu sacrificed to obtain the necessary rection.

"To make this correction 60 per of the light which reaches the da screen is absorbed, therefore as mu possible of the total light from the should be transmitted through the s to give adequate results for the e expended.

"The light rays from an electric are emitted in all directions aroun lamp, and just as much of the li given in the upward direction as i downward direction. Fully 75 per of the total light from the bare la given out in the zone from 60 d from the vertical to 180 degrees (ze To utilize the maximum amount upward and downward light it is sary to collect it by means of an ef reflector and redirect it through th light screen.

"The variations between different of daylight are much greater th generally recognized. Sensitive c which match in ordinary daylig thrown out of match by direct su and, in the reverse direction, by light from a blue sky."

The Holophane daylight unit s meet a need amongst all classes community, and should be of es value to those who are concerned the production, sale, purchase, or e of coloured goods of all kinds woollen, cotton, pottery, objects and the like. Artificial daylig equally important to many who dea delicate shades of "white"—as, f stance, paper bleachers, wool scourers refiners, millers, dentists; also to w in academic, medical research, and trial laboratories.

nesday, February 8, 1922. Vol. LV. No. 1414

THE ARCHITECTS' JOURNAL & Architectural Engineer

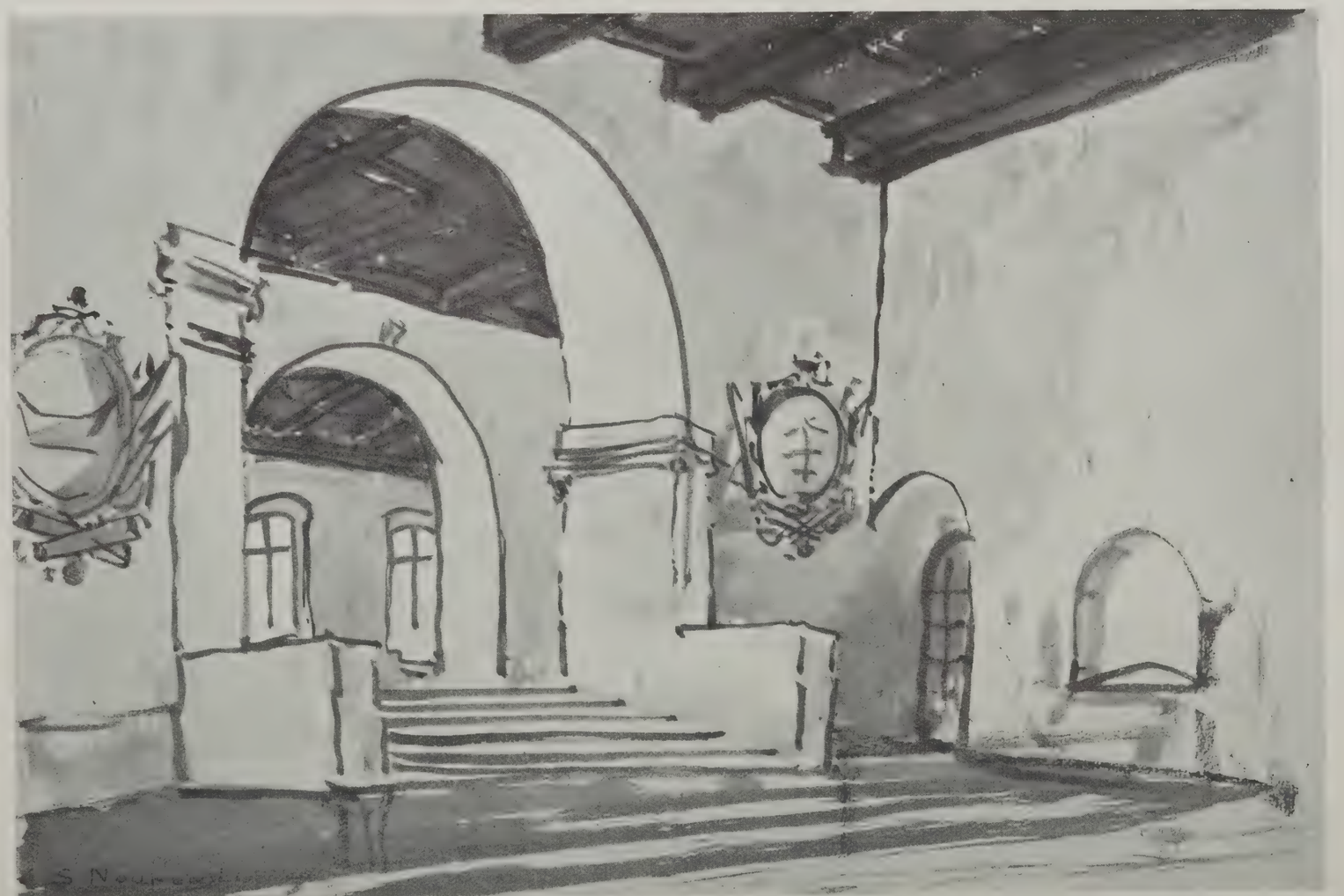
With which is incorporated "The Builders' Journal"

A JESUIT CHURCH.
From the Drawing by S. Noakowski.

27-29 Tothill Street, Westminster, S.W.1.

Drawings of Architecture. 1.—The Interior of a Polish Palace

From the Drawing by S. Noakowski



In the article which appears this week on the art of Professor Noakowski, the two chief qualities attributed to him are a sense of space and a sense of architectural form. Both these qualities are revealed clearly enough in the drawing of the Polish Palace illustrated above, where the artist's relish for the broad, significant lines of the design is only equalled by his keen appreciation of the air which exists in the room, and of the light which appears

THE

ARCHITECTS' JOURNAL

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nesday, February 8, 1922 Volume LV. [No. 1414

ord Knutsford and the City Churches

N our correspondence columns we print a characteristic letter from Viscount Knutsford. It is breezily humorous, and a little scornful of opinions other than his own. At the outset, he affects not to understand sage he quotes from Mr. Arthur Keen. We say "affects," ord Knutsford being a scholar of high accomplishment, earned in the subtleties of legal dialectics, it is impossible ppose that he can have failed to grasp a meaning that rfectly plain to a plain understanding—to anybody s not bent on reducing it to absurdity.

. Keen does not, as we understand him, "compare the ng with the non-existing." We take it that rather comparing two abstractions, one of which might ately assume concrete substance if the Church were mined to turn its property to spiritual account—not e suburbs, but as and where it stands—rather than to oy it with the object of raising money. But we have ish to "chop logic"; and Mr. Keen may be left to d himself against Lord Knutsford's *badinage*.

rd Knutsford does not, we trust, class Mr. Keen among who make a fetish of anything simply because it is That would be as erroneous an assumption as that associations formerly connected with" some of the churches "are as dead, and as impossible to resurrect, e associations originally connected with Stonehenge." th these comparisons, Lord Knutsford seems to be exactly what he has just deprecated—comparing the ng with the non-existing. The associations of Wren hes smite one in the eye. Those "originally connected Stonehenge" have to be laboriously sought. And are infer that Lord Knutsford would efface Stonehenge dily as he would demolish the City churches?

do not wish to traverse Lord Knutsford's letter item em. Rather we would seek for points of agreement. points are not to be found, we fear, on the æsthetic f the argument. They exist, rather, on the spiritual n some of the practical issues involved. We quite with him that it is a shame to call "livings" what l be more rightly called "starvings," and that it is shame to have had churches built out of all sight by and banks." But who or what is or was responsible for things? Certainly not persons of like type of mind those who now wish to save the City churches from iction. The reference to these stifled or bank-and-jostled churches is a little unfortunate for the argu- from utility, which has apparently now got from the to the oak stage; for whereas our grandfathers merely ered the churches, our contemporaries contend that expedient to destroy them altogether. That is the rophe we wish to avoid, and Lord Knutsford's genial r about tears, hear-hears, and Noodle's Oration, is beside the mark. It will not divert the attention of t men from the very serious issues at stake. Nor will ry assumption that because he is at one extreme end of the argument, all who wish to preserve the churches are at the other—are necessarily foes to the cold-drawn common sense in which he seems desirous of establishing a monopoly. We unhesitatingly credit Lord Knutsford with a sincerity equal to our own, and realize very clearly that his seeming mockery is intended as an antidote to mawkishness. It may serve that purpose where the mawkishness exists. It may conceivably correct sentimentality, which is admittedly a sort of morbid secretion; but it is quite ineffectual against honest and defensible sentiment, which is the most powerful of the forces that move men's minds and determine their actions.

With Church polity and with Church finance, *per se*, we can have nothing to do. Our correspondent's ridicule of Mr. Arthur Keen's reference to the activities of the R.I.B.A. is a rather sharp warning that it is best to keep clear of such issues. Without referring to any subject that might hurt tender susceptibilities, and without presuming to dictate exactly what steps should be taken to make the City churches popular, we feel bound to reiterate what we have so often said before—that, because of the strength of sentiment—because, in destroying a church, more than the fabric is destroyed, the wholesale destruction of the City churches would rob the City of London of the distinctive character that Wren gave it—would, as it were, sear its very soul; æsthetically, at all events, if not spiritually. Certainly St. Paul's Cathedral might be graciously allowed to remain (as long as its magnificent and commercially covetable site was kept out of the property market; but the destruction of the other churches would morally weaken its claim to be spared) to testify that London was not a pagan city. There would, however, be little other evidence of the fact if most of the other churches by the same architect were destroyed; unless the Y.M.C.A. ("*Horresco referens*," his lordship may add) takes the matter in hand with its accustomed energy.

Our correspondent is greatly moved by the spiritual destitution of the suburbs, and by the poverty of many hard-working clergymen. The sentiment—he must really allow us to call it that—does him honour. It commands the sympathy, we are sure, of all the readers of this JOURNAL, especially, we willventure to say, that of those very persons who are most anxious that the City churches shall be saved.

Nevertheless, we cannot help thinking that the ecclesiastical authorities are rather inept if they cannot find some excellent use for their City churches, and if they cannot contrive some more excellent way of raising money, some innocent alternative to the crude project of selling their birthright, and thus incurring (unjustly, no doubt, but none the less certainly) the odium that attaches to the alleged worship of Mammon, and at the same time setting a conspicuous and forceful example of disregard for venerable and gracious things. Surely the Church authorities will not cast such a boomerang.

Notes and Comments

Wren as Vandalist !

Mr. Ernest Law, who loves Hampton Court as Ben Jonson loved Shakespeare—"as much as any man this side of idolatry"—has a nasty dig at Wren. Mr. Law, relating in "The Daily Telegraph" some of the circumstances that make interesting the original doorway between Henry VIII's great Watching Chamber and the "Haunted Gallery"—the gallery leading to the chapel—repeats the charge he brought against Wren some five years ago. Mr. Law writes: "Unfortunately, the ancient stone arched door made by Henry VIII, half of which was discovered in the course of the preparations for the opening of the gallery to the public in 1917, was mutilated by Wren, who substituted the tall, gaunt, oak-framed door, which is altogether out of proportion to the height and size of the room." Let us quickly change the painful subject. Mr. Law's main object is not to blame Wren, but to announce that the door is to be opened again to the public after having been closed for 187 years. Through this doorway Shakespeare must have passed with his company of actors. Through it also passed the body of Jane Seymour. Queen Catherine Howard passed through it on her way to the Tower and the scaffold; so did the ex-Protector Somerset, going forth to the same destination and fate. Queen Elizabeth passed through to the chapel, whither she went in splendid state. Mr. Law, in fact, is so vastly interesting about this old doorway that we can almost forgive him his disparaging remark about Wren; whom, however, we shall take leave to love all the more for his little imperfections. But when Mr. Law next sees ghosts in the Haunted Gallery, he will be sure to encounter the irate wraith of Wren, threatening him with a ghostly T-square.

Demolishing the Huts

At last the huts are being removed from the parks; and from this cause, and in consequence of the clearances that are being made for the Guards' Memorial, St. James's Park is for avoidance during the wet weather. An army recruited from the ranks of the unemployed seem to be engaged in a prodigious game of mud-pies. When, in the reign of Charles II, the great French landscape-gardener, Le Nôtre, laid it out, the site was "a marshy meadow," and for the moment it seems to have reverted to that condition; but it was, of course, Nash who, in 1827–29, gave St. James's Park its pre-war form. It is also gratifying to note that the huts in the Embankment Gardens are at last being dismantled. When shall we see the end of those that cumber the roofs of the Admiralty Building and the Admiralty Arch ?

Taxation and the Architect

On Valentine's Day the Chancellor of the Exchequer will receive a deputation of business men. They will, we hope, succeed in convincing him of the appallingly serious effects that extortionate taxation is having on trade. No doubt he is aware of the fact; but it is the sort of fact that should be driven home and clinched. It is not that a Minister will not act except under pressure, but that he cannot. Generally speaking, he must show his Government that he is being pushed irresistibly into the posture he takes before them. The deputation will urge the abolition of the three years' average for income tax, the reduction of that tax, the abolition of the corporation profits tax, and the adoption of certain measures respecting excess profits duty. On the following day Sir Robert Horne will receive a deputation from the Federation of British Industries, who will urge the grave danger of disregarding repeated warnings as to the effects on industry of continuing the present insupportable burden of taxation. In case cynical members of the profession should urge that all this fuss about income tax have but little or nothing of interest for them, the inc from architecture remaining static at zero, the remi may be permissible that the upward or downward m ment of the mercury depending entirely on the fluctuat of trade, the architect is vitally interested in any moven for knocking off its shackles or unloading it of depres burdens. One detail that is of very special concern to architect is the proposal of both deputations to abolish three years' average. This system of assessment ha many instances operated with almost cynical cru During the war, the State first stopped the archit income, and then proceeded to tax it; which would been laughable had it not been pathetically unjust. A tects, who are profoundly affected by the issues involve movements for the reduction of taxation, should tal more active share in them; but we do not observe the n of any architect among the members of the two dep tions to the Treasury.

Optimism in the Steel Industry

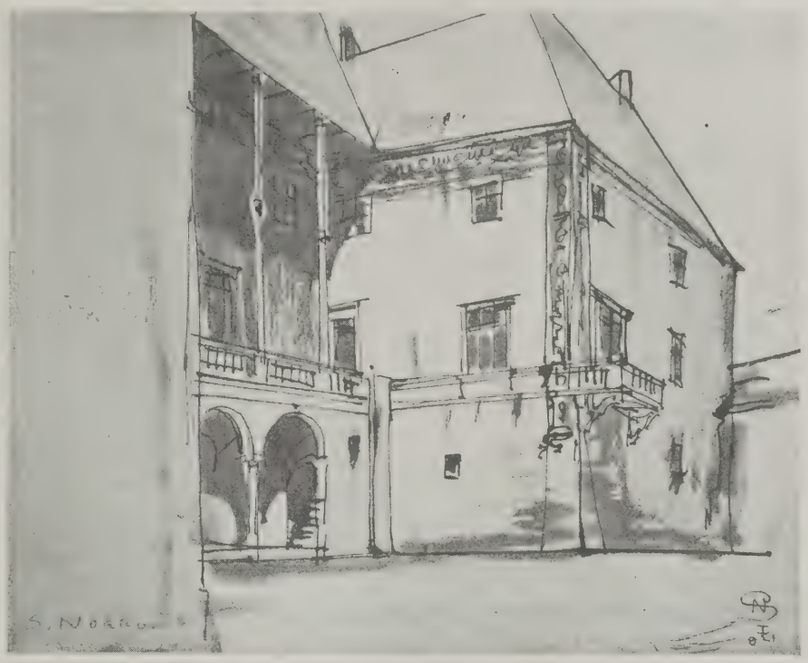
One's interest in the steel trade is now almost as g directly as indirectly. The increasing use of steel building material, whether as reinforcement to concret otherwise, gives a direct interest in the state of the ma for it; and the amount of trade that is being done by manufacturers is, generally speaking, a fairly trustwo index to the prosperity or otherwise of the nation's trade industry. It is therefore of good augury that at the an dinner of the London Iron and Steel Exchange the spea adopted so optimistic a tone. Sir Peter Rylands everything through rose-tinted spectacles. He said in the last eighteen months of stagnation the general st throughout the world had been depleted, the Conti would not be able to meet the new demand, and it wanted a little confidence and encouragement to re the demand. His conclusion that "the circumstance the time were encouraging, and gave room for optimism hope," evoked hearty cheers, and inspired the report the meeting to give his account of it the encouraging tion, "Better Trade Outlook." We are firm believe optimism. It has the knack of justifying itself.

The Larger London Movement

One of the best-informed and one of the most vers of the witnesses who have given evidence before the R Commission is undoubtedly Captain O. E. Warburg, was able to throw light on such diverse subjects as h services, education, and the equalization of rates. special interest to architects and builders was his opi that "any body which was responsible for determining total amount of institutional accommodation require either London or Greater London, must have regard t existence of the great voluntary hospitals, and it woul very convenient, in dealing with them, if they could with central bodies." Clearly this may portend an in tant change of building policy. With respect to equa tion of rates, Captain Warburg said that the London Co Council had been for a long time in favour of further eq zation of borough rates, but the difficulty had been to f a scheme which would not encourage local extravag That is, we take it, the real crux of the problem. from the local authority the power of "making the r and there is no incentive to spend it economically. incidence also is a most important point for architect well as for builders and property-owners; for equaliz of rates tends to equalize several matters that relate or less directly to building, and in this regard at leas movement should be closely watched. Evidently tralization is not the first and last word in economy.

The Art of S. Noakowski

PROFESSOR ROTHENSTEIN'S recent address at the R.I.B.A. created a good deal of surprise. One or two speakers tried to find some extenuation for the "pretty display on paper" into h the architect's drawing (his per- tive especially) is charged with having nerated, but they acknowledged imously the justice of the Professor's rks. However, there was one point h might have been raised—a point h Sir Reginald Blomfield flirted with s letter proposing the vote of thanks, did not nail to the ground (or what- the right metaphor is); and since it ome bearing on Professor Noakowski's ings, it may as well be considered . Judging from modern examples of pective drawings, said Professor enstein, instead of employing in his ing the severity of manner, the larship, which is natural and appro- e to his kind of work—instead of g "that God-sent instrument the uare," to accomplish "clean, articu- line drawing," which artists consider highest virtue in any drawing, and in the architect's drawing—the itect abandons this great privilege of n order to indulge in a species of essionism and vague emotionalism hy of the amateur, because he thinks by this means he will make his wing "artistic" and give it "feeling." swift straight line is one of the most beautiful things in world. The mere ability to draw it is envied by every t under the sun; yet here is the architect relinquishing his greatest privilege for a slipshod, sloppy impressionism which all artists who know anything about drawing despise. This is a sound criticism. The soundness of it is indisputable from the draughtsman's point of view. But the architect has something to add to this point, or, rather, he has a modification to make—a modification which Sir Reginald Blomfield half expressed when he said: "The painter pursues his drawing for its own sake as his actual means of expression; it is the complement and co-equal of his idea; but with the architect drawing is only a means to an end. It is not his final means of expression, merely a stage on the way to the realization of his idea in actual materials." If, being present, he had then heard Professor Rothenstein's address (he sent his contribution to the discussion by letter), he would no doubt have gone on like this: Professor Rothenstein—the painter and draughtsman—is interested in the drawing as a Drawing. The architect is not interested in the drawing as a drawing, but is interested, at any rate primarily, in the drawing as an expression of an architectural conception. He is interested not in the drawing, but in the architecture. As far as he is concerned the drawing is good in so far as it expresses, and bad in so far as it fails to express, the building it interprets, just as the translation of a story is good in so far as it manages to capture the spirit of the original. True, a fine interpretation of an architectural theme must of necessity imply draughtsmanship which is articulate, expressive, and therefore accomplished; but the converse does not hold good. The articulate expressive draughtsmanship which Professor Rothenstein advocates, though important in itself, does not necessarily imply good architectural draughtsmanship.



A SIXTEENTH-CENTURY POLISH PALACE.

A THIRTEENTH-CENTURY INTERIOR.

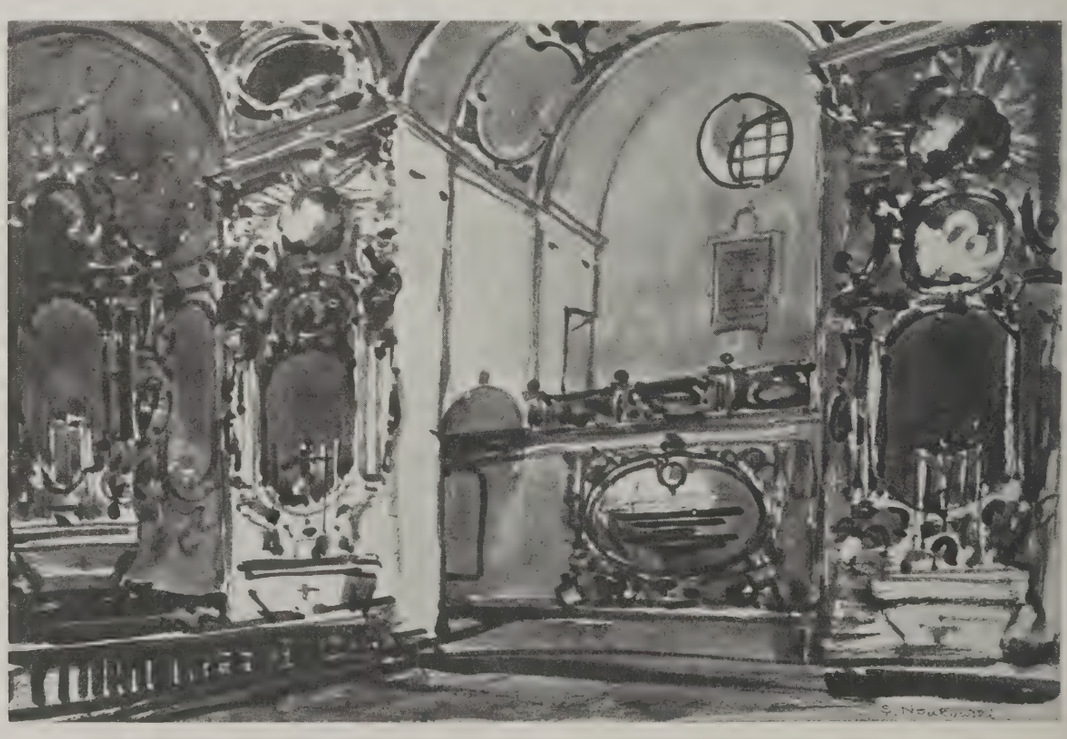
To prove this one has only to turn to the work of contemporary artists who draw buildings: men like MacColl, Muirhead Bone, Francis Dodd, Pennell, even Whistler, whose art in so far as they are draughtsmen is no doubt exquisite, yet lacks quite naturally that architectural sense which is peculiar to architects.

One sees these drawings in various exhibitions at this time of the year—sketches of foreign streets or old churches which are immaculate regarded as drawings; but regarded as significant expressions of architecture they have no value whatever.

I labour this point because it bears upon the most striking feature of Professor Noakowski's art. Rothenstein, one feels, would smile sourly upon the drawings, shaking his head over the loudness and looseness of them, and complaining that Noakowski had not counted the stones in his buildings before he drew them. He would select them one by one like the carpenter with the oysters, and devour them with tears in his eyes. But if he did this (I am not sure that he would, but if he did) he would be quite wrong, because the fundamental virtue of Noakowski's work lies not in his drawing, which we will not discuss, but in his conception of architecture, which is unique and superb.

Take his Triumphal Arch to General Foch. Covered with a profusion of detail, it is yet ruthlessly simple; a solid mass rising from the ground sheer like a cliff. You can feel its weight on your mind. You feel, too, that you could walk through it and pass down the road behind it. It is not a pattern upon the paper, nor does it simulate reality; it is a drawing always, yet it is so obviously a mass, a solid thing in three dimensions—a piece of architecture. With what assurance the lines runs through the different planes. How co-ordinate and inevitable appears each member of the design, and how vividly the rectangular forms tell against the rococo. Even the letters in the word FOCH discover a sort of architectural simplicity which accentuates the riot of ornament breaking like foam on the crest of the arch. Nothing could describe the conception better than to say that the arch is a rock swept by passing waves which leave their foam creaming on its head and slipping down its flanks. And the immobility and silence of t rock is intensified by an avenue of great trees behind which appears to flow past like a river. The drawing clear, simple like the early morning, and crude with t intensity of the artist's realization.

Hardly ever before has one seen on paper, or in a buildi for that matter, so keen a conception of fundamentals architecture. I said just now that the ornament look like foam creaming over a rock. There was some reas in this, for just as the foam has no relationship with t rock, but is accessory and ephemeral, and veils but do not obscure the lines of the rock, so the ornament on th arch appears to bear no relationship to the mass of t arch, but is entirely accessory (like the decorations Wren's buildings), and serves only to point more distinct the principal features of the composition. The ornamer here is no more than a series of pleasing gestures (note t delightful suggestion at the left base of the arch), and we it to dissolve like smoke would not affect the design o jot. In every example of Noakowski's design you will fi precisely the same contempt for ornament. He will pile on with reckless bravado, but he will pile it on after he h finished. His Interior of a Polish Church is a good instan of this. Whether this is a creation of his own or a sket from an actual example I do not know; but here, with t same grasp of essentials which he displays in his Triumph Arch, and with the same loose relish in unessentials, he h thrown all his conviction—the drawing pronounces it—in realizing the curve of the vaults, the rhythm of the arch that spring in radiating lines, and the strength of t great piers; suggesting at the same time that secret mov ment and lightness which is the mystery of a vault church. His main object accomplished, he turns with ze to his decorations. He literally plasters his walls wi ornament. He begins at the bottom with a simple alta but by the time he has reached the ceiling his altar h become an orgy. Yet through all this extravagance h never loses his sensitiveness to forms. Nothing could be mo sensitively done than the oval plaque in the centre of t picture, or the circular window above; and always he seen conscious in the back of his mind of the bare walls behin



THE INTERIOR OF A POLISH CHURCH.

From the Drawing by S. Noakowski.

Drawings of Architecture. 2.—Projet of a Triumphal Arch to General Foch

From the Drawing by S. Noakowski

While the chief interest of this drawing lies in its keen realization of architectural forms, a word is due to the composition of the drawing itself, which, regarded as a picture, is a work of high merit. The position of the arch on the paper, the broad open pattern of the sky, the sweeping lines of the trees—all convey that feeling of conviction, of articulate expression, which is the essence of a work of art. Though the artist has not laid his pencil to the sky, he has yet managed to achieve a suggestion of infinity, endless distance and light.

ack to Simplicity" is the slogan to-day (and rightly so); these drawings serve to show that when the fundamentals of design are rightly appreciated the question of plicity or extravagance simply does not occur at all. 1 cannot have simple or extravagant fundamentals. 1 can only have simple or extravagant ornament, and ament is always a frivolity, or, rather, shall we say, a ntaneous expression of happiness—the attribute to, not material of, design. Is it worth adding that the beggled cow-tails exhibited to-day are not ornament?

Curiously enough (I say "curiously" because the point dealt with by Professor Rothenstein) Noakowski never, hardly ever, allows people to violate by their presence studies the thing-in-itself rather than what the thing symbolizes. He does not reflect; he creates. This is an important distinction, because it shows that Noakowski is that phenomenon, a man with an architectural mind. "Atmosphere," both of the physical and spiritual kind, is abhorrent to him, for it obscures the issue, brings all manner of sentimental irrelevancies into what is clear, ultimate, mathematically precise. But while he will have no truck with Atmosphere, he comprehends naturally, as it seems, the functions and the limitations of space, which is the element governing architectural design. His nice feeling for space appears in the drawing of the sarcophagus of a Polish General, where, by the way, the purist again

THE SARCOPHAGUS OF A POLISH GENERAL

From the Drawing by S. Noakowski.

e dignity of his buildings. Of all his drawings recently on hibition at McLean's Galleries in the Haymarket, only e contained figures, and they might just as well not have en there. The same reason that accounts for his neglect the human side accounts for the innocence in his drawgs of all attempts after "atmosphere," beloved of the nateur. He is the antithesis to Brangwyn, the humanist, no draws a great building in order that he may compare grandeur with the sadness of the crowds who pass under and who built it. Brangwyn, if he draws a cathedral, akes a Fair in progress under its buttresses; he sees in it expression of humanity. A cathedral to him is a buildg of a thousand hands. But to Noakowski a cathedral is e expression of an æsthetic idea. He is a purist. He betrays himself by his interest in the visual aspect of the scene. Here, as by some magic, he not only contrives to make the candle in the foreground stand several feet away from the coffin, the other five having their exact relative positions, but actually expresses the void of air enclosed by the four walls. You can see the candle flames flickering in the draught, and feel the little winds blowing about the room.

Invariably in Noakowski's drawings the same two qualities occur: a sense of form and a sense of space, together producing that architectural sense which is his unique endowment. For this reason, were a lesson in architecture desired, I think one would have to go far before finding such another lesson as Noakowski's drawings present.

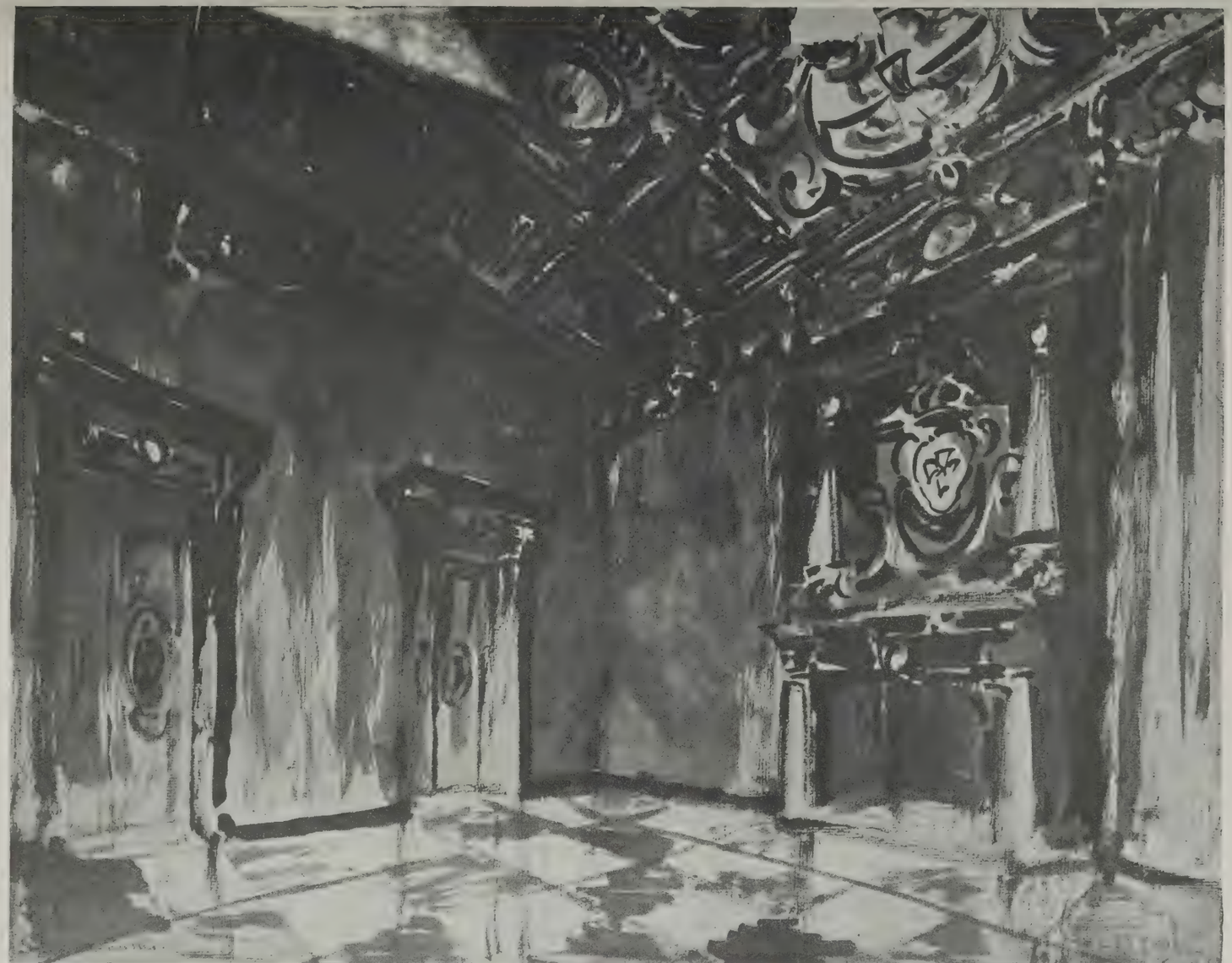
They are in the truest sense an education, and make their points in the simplest way, so that anybody can comprehend them. In the Palace Interior of the Poniatowski Period on this page, you find the same two principles operating, the combination producing in this perspective—and what a magnificent perspective!—a sensation of exaltation and majesty which words are powerless to describe. Again in the Interior of the Royal Palace at Wawel one is conscious that the room is a hollow box filled by a void, and that the significance of the design depends upon its existence as a box. It should be remarked, too, that the design here includes walls, floor, and ceiling—the whole room. If the walls grow monotonous and need something to stimulate them, the architect does not apply a trivial spot of decoration, but decorates the whole ceiling, and then links it up with the rest of the design by means of the chimneypiece, just as the floor is linked to the design by means of the door-frames. This is real architectural design—bold, confident, compelling, like the drawing itself. If you would have something less aggressive, turn to the Thirteenth-century Interior and the little delicate Sixteenth-century Palace, both on page 221. About these one would say that the architect realizes exquisitely the texture of the different materials; in the former the weight and dry roughness of the timber roof; in the latter, which is a perfect thing, the smooth box-like appearance of the walls. These are so seductive in their simplicity that one is animated by a passion to trace gorgeous patterns across the surface of them, the actual design wrought upon them being most cunning in its restraint, in its refusal to do the expected. To end on a note of admiration I would commend to your notice the two slender posts supporting the roof of the veranda in this drawing. Look at them very closely. They are delicious; they reveal all that they do and are, and suggest music.

One remark on Noakowski's technique is perhaps advisable. He is loose, it is true, and does not search out the particularities of the forms he is interpreting, and that is not a thing to be encouraged anywhere. But with Noakowski this looseness is not an intrinsic condition of his drawing, broad though his drawing naturally is. It is a privilege won by absolute mastery. By long experience he has got to know so intimately each shape that he draws that he is able to compel into the scope of a line what another man would record in six. Each mark of his has the virtue of a piece of shorthand. Noakowski is thus an example of a truth which is as old as the hills; that architecture is in its essence simple, and that the essence of simplicity is economy.

H. DE C.

THE INTERIOR OF A POLISH PALACE OF THE PONIATOWSKI PERIOD.
From the Drawing by S. Noakowski.

From a Drawing by S. Noakowski



In this interior Professor Noakowski has confined himself to essentials, achieving his effect by emphasizing the principal features in the room. The interplay of the rectangular forms of floor, doorways, chimney-piece, walls and ceiling, creates a vigorous and sustained design which is as simple as it is effective; while the way in which he has bound the composition together by means of chimney-piece and door-frame- the one anchoring the ceiling to the walls, the other the walls to the floor—indicates the best method of overcoming the difficulties of this kind of composition.

Ernest Newton: An Appreciation

His Skill as a Planner

By ARTHUR KEEN, F.R.I.B.A

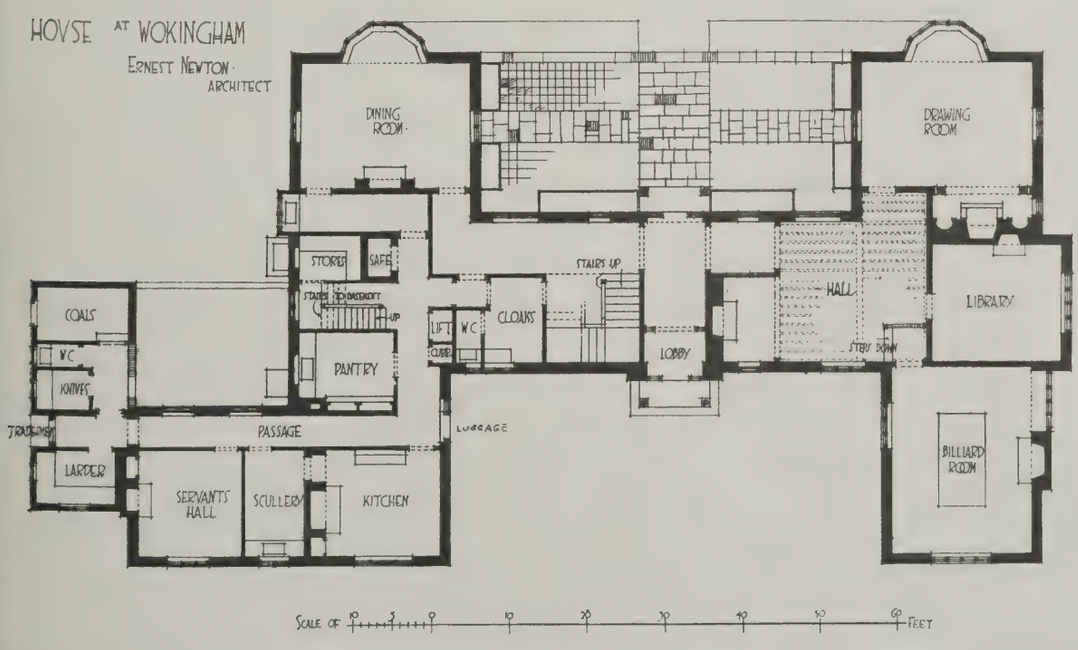
ERNEST NEWTON was articled to Norman Shaw in the old days at Argyll Street when W. E. Nesfield was still there. Shaw removed to Bloomsbury Square in 1876 or the beginning of 1877, and Ernest Newton was then his chief assistant. The office was full of important works: Pierrepont, Merrist Wood, Wyther Lodge, Swan House, St. Margaret's Church, and others, so that he set out with a good standard before him of design and taste, and the personal influence on him of both Shaw and Nesfield must have been a great factor in his success. The essential difference between Ernest Newton and his master seems to me to be this: that whereas Shaw, with his unequalled resource and power of original conception, and his extraordinary confidence in his own power, made almost every building a surprise, a new departure, as witness the contrasts between, say, Grayside and Lowther Lodge, between St. Peter's at Bournemouth and St. Margaret's, Ilkley; Newton, on the other hand, proceeded by regular steps from the tightly planned half-hung houses that he built in numbers in the district of Sidcup, Bromley, and Chislehurst, up to the spacious and dignified mansions that belong to the period just before the war; indeed, a series of illustrations of his houses in order of date would form a very interesting study in the possibilities that domestic architecture holds in the present day.

Without disparagement of any one, I claim that the charming sweetness that belongs by heredity to the English house in every degree, from the cottage upwards, has never been more fully shown than in these houses. The early ones were wonders of planning—perfect in respect of light, in the placing of doors and fireplaces, in the provision of cupboards and pantries and all that is necessary in a good workable house; and all so well contrived that the amount of good accommodation presented in a small structure is remarkable. One thing in these houses that has always aroused my admiration is the way in which billiard-rooms were contrived in the roofs—a very difficult thing in a small house, because it places a severe limit on the possible positions of staircases and chimneys.

I suppose that the most definite point of change in his method of treatment was in Mr. Lewis Wigram's house at Haslemere in 1894, a sash-windowed, symmetrical house curiously like the beautiful Manor House at Bletchingley, which I believe he had never seen or heard of; a house that he studied and worked at with his utmost care and persistence, which is saying a very great deal, for the persistence with which he would try scheme after scheme in rough hand sketches on tracing paper before he was satisfied that the right solution of the plan had arrived was most striking. If there was one thing more than another that he was convinced of it was that the plan must be paramount; with the plan right in all respects everything would follow naturally and easily; with an imperfect plan the rest was hopeless. It is easy to test this by studying one or two of his best houses in relation to their plan—say, Brand Lodge at Malvern, or Hartley Green at Winchfield. Given the plan and a right sense of values in building, the design almost spells itself out.

I have seen him sometimes for days together, anxious and uneasy, pencilling on small bits of paper, wandering here and there, testing one thing after another, until he saw the plan as it ought to be. Having arrived at it he almost invariably carried it through practically unaltered, for with all his kindness and good nature he was most difficult to move when he had settled upon the right method; in other things as well as in house building.

I have said that he did not make startling departures in the design of his buildings, but the number of different ways in which he handled the matter of building was very remark-



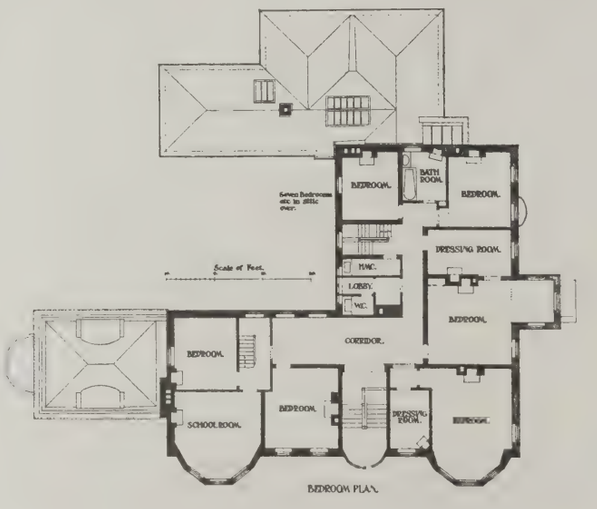
GROUND-FLOOR PLAN OF HOUSE AT WOKINGHAM.

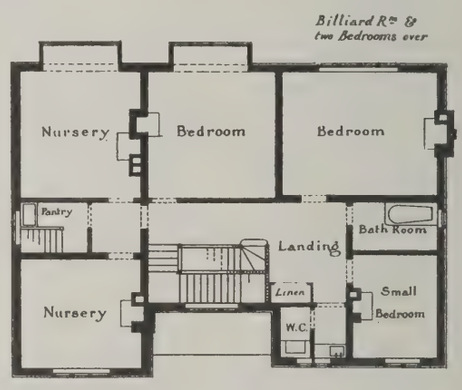
able. Severe or playful, working in brick or flint or granite, or any other material that the place or the occasion suggested, he was equally happy and equally sound. I cannot think of any building he erected in which the treatment does not seem to be right and spontaneous and in good taste. He always thought of exteriors in terms of mass; in making rough sketches of elevations he would rub the pencil over them with his fingers until he had produced the impression of the solid substance on which the main effect depended, and he used the same method in ascertaining broadly the relations of voids and solids. Soundness of planning, breadth of handling in the masses and in all essential factors —it is as good a philosophy of design as can be found! Having settled preliminaries in this way, he would refine the work in detail to the uttermost possibility of improvement. The point to which this refinement was carried in such buildings as Martins Bank at Bromley, or "Luckley" at Wokingham, for instance, was quite extraordinary. He had an unerring sense of scale and values; and while he never let texture and the mark of the human factor in material take the place of design, he fully understood the value, and indeed the necessity, of texture as an item in successful building to produce beauty.

The great houses that he produced from about 1910 onwards are probably the best and most characteristically English houses of this generation; Great Burgh, Kingswood Court, The Flint House at Goring, Colonel Barclay's house at Dorking, Mr. Eric Parker's at Hambledon, and others —their plans are a study in themselves; the bigness, th symmetry, the generous spaciousness of corridors and hall the admirable distribution of light, the dignity, the sen of proportion, and the homely domestic quality throug out—it all serves to carry the art of house-building up to level that has not been reached before, and sets a standa that we must struggle hard to maintain.

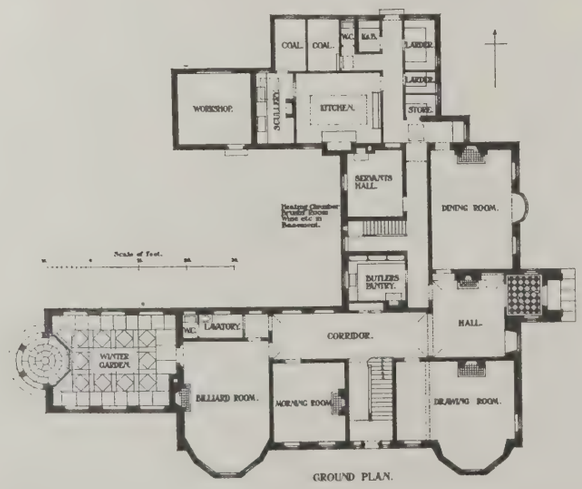
The gardens of many of these houses—of most of them—were designed by himself, for he was very insistent upo gardens being part of the architect's task, and he dealt wit them on very broad and successful lines; the garden of h own house at Hazeley in Hampshire was an absolu delight.

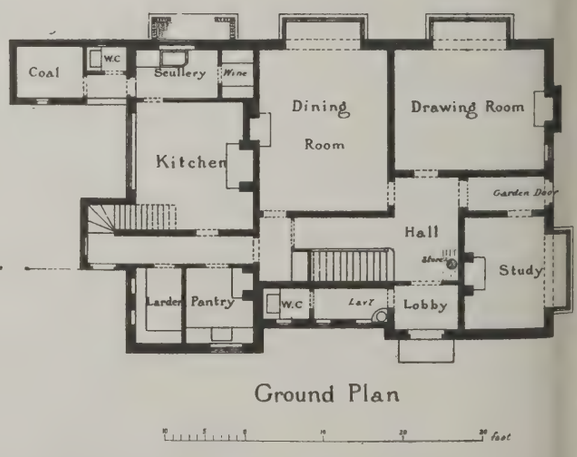
I have not space in which to discuss the other types buildings that he dealt with, banks, churches, busine premises, and so forth; they are well known, and what said about houses applies equally to them; but Mr. Newto was essentially a master of domestic work, and in that fie he has maintained in a worthy way the tradition that centuries old. I must leave myself room to speak of qua ties that, apart from his architecture, brought him th respect and confidence, the affection, that are as notab as it. His disposition was naturally friendly, and he w interested in all people with whom he came into contac whether bricklayers, office messengers, schoolmasters, bankers. When a man is a good and willing talker, wide experienced, and possessing clear views and sound judgmen the circle that grows up around him is a wide one. M





Bedroom Plan

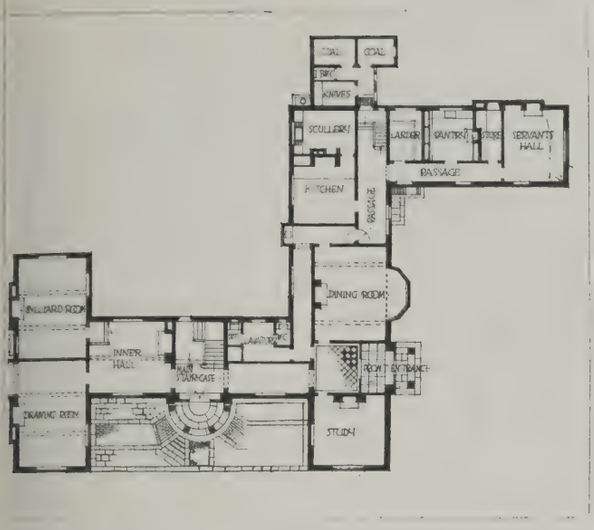




Ground Plan

HOUSE AT HASLEMERE.

HOUSE AT BICKLEY.



HOUSE AT HAMBLEDON, SURREY.

Newton had these qualities, and he possessed in addition the saving grace of the sense of humour in generous measure; further, he enjoyed fun like a boy. I scarcely like to give an instance of it here, but this is a characteristic one: An irate client came one day to complain of his house being unfinished, or something of the kind, and as he came in at the door Newton solemnly crept under the table and sat there without a word like a small boy in disgrace. It resulted in a laugh and "Yes, you may well hide under the table," and made a difficult interview into a pleasant one.

Most people are very human and very accessible to those who know how to handle them. Ernest Newton's personal qualities were of enormous value to the Government when it took over the Limitation of Building during the war; it was very difficult and responsible work; it contained all the material for serious opposition and trouble; it affected operations of great importance; but it was carried through with such reasonableness, with such good feeling, such courtesy and toleration, that opposition which might well have been as strenuous as any the Government had to meet was disarmed. The work covered three years of exacting toil which left him in the end exhausted and aged; but he did it faithfully in the full confidence that anything which strengthened the fighting hand of the nation was due from anyone who could give it. Albeit a man of peace, he became on the outbreak of war a determined recruiter; his motto was that of Polonius: "Beware of entrance to a quarrel; but being in, bear 't that the opposéd may beware of thee," and during all the years of the war he thought continually of what might be done or what might become necessary to be done in order to increase our strength.

Those who worked with him on the Council of the R.I.B.A. will support me in speaking of the ability, the tact, and the faithfulness with which he represented the Institute and guided its affairs. We have lost a friend, an architect of outstanding power and influence, and a man from whom we shall always think of with great affection.

ARTHUR KEEN.
28-1-22.

It ought to be added that Newton was a very capable writer. His letters were breezy, humorous, and well expressed, and his many contributions to the Press were, in my judgment, for what it is worth, distinguished by good scholarly English used in well-framed sentences and carrying his meaning directly and clearly. Certainly they were very convincing, and if any evidence of this is wanted, it is found in the effect produced by his recent letters upon the evils of coal smoke. The subject became a popular one at once, and it is to be hoped, seriously, that means will be found for carrying on the crusade that he launched with such a good prospect of success. A. K.

Paisley War Memorial Competition

We have often commented upon the indifference of the general press towards matters of architectural interest. It is therefore extremely gratifying to note a definite change of policy in this respect, and we record the fact with much satisfaction. The latest instance to come to our notice is a very able article in "The Glasgow Herald" on the Paisley War Memorial competition designs, from which we take the excerpts which follow. What is to be specially commended in the article is the recognition of the enormous expense to which architects are put in preparing competition designs.

"Paisley should be well satisfied with the response made by sculptors and architects to her invitation to submit designs; a response satisfactory alike in quantity and quality, for something over 190 have complied, and four large galleries are filled with the several models and drawings.

"Sir Robert Lorimer's platform treatment, the basis of the whole composition, is at once the obvious, the simplest, and the best. Almost alone among the architects he grasped the problem, and by entering from the higher gradient he rose by a single step to his level platform. The steeply sloping site proved a serious difficulty to most of the competitors, who had either not visited it, or else had failed to apprehend the unsatisfactory appearance of a series of steps ranging on a downward slope from one to sometimes seven, each of lessening length and increasing projection, as they meandered down the awkward gradient. Sir Robert's level platform, with its enclosure wall slightly curved towards the square, but straight behind the memorial, and uniformly treated at the two highest corners, is masterly in its direct simplicity, while its punctuation of shields and other carving gives fitting interest and richness to its value as a platform base and wall background. Superimposed upon his imposing and dignified platform, the base and plinth of the memorial are in keeping therewith, enriched as are the platform walls by emblematic carving and lettering, well placed and designed, one simple line of lettering on the principal face immediately below the bronze group being specially telling in effect."

The writer of the article comments upon the pathos of so much brilliantly wasted effort expended in the competition, computed even in money value. "On an average," he says, "197 designs could not from first to last have cost their producers less than £50 each; or, in all, over £10,000. The sum to be expended on the memorial is about £11,000, much of which will go in actual work and raw material. Economically the proposition is, of course, absurd; yet there it is, and the amount of work exhibited, some of it beautiful to a degree, is surely pathetic if measured even only by money value."

Post Office Reform

It has been popularly supposed that the Treasury and the General Post Office are at loggerheads about the appropriation of the £10,000,000 surplus that the Post Office is estimated to earn next year. It is stated that the Post Office takes the very sensible view that "its business should be so conducted as to supply the public with essential services at the lowest possible cost." On the other hand, a hard-up Government wants to get hold of the money, and apparently there is going to be a tussle for it. That the Post Office view is the sound one we have always contended. The alternative suggestion is merely a roundabout way of imposing fresh taxation in a disguised form. If it were no more than that, there would be no serious ground of complaint; but, as said so often, heavy postage is heavily in restraint of trade. To restrict communication is to restrict business. Very heartily, therefore, we commend the proposal to spend the surplus not even in the relief of taxation, but in giving more free play to business. In particular we would commend the supposed intention to bring down the postcard rate to the popular penny, and the printed matter rate to a halfpenny. Both reforms will give a great stimulus to business.

Mr. Gordon Craig on Stage Settings

WE have received the following communication from Mr. Gordon Craig :—

Mr. Crompton's article in your issue of December 14, 1921, and the design for "The Sleeping Princess" by, I gather, some Russian scene-painter for a Russian ballet, made me so interested that I am writing you a short note about them.

I send you a pretty little design which I have just come across by the celebrated Ferdinand Galli da Bibiena (circa 1690).

This design, if you place it side by side with the photograph which you reproduced on page 707, will be seen to be the parent of the scene by the Russian artist, whoever he may be.

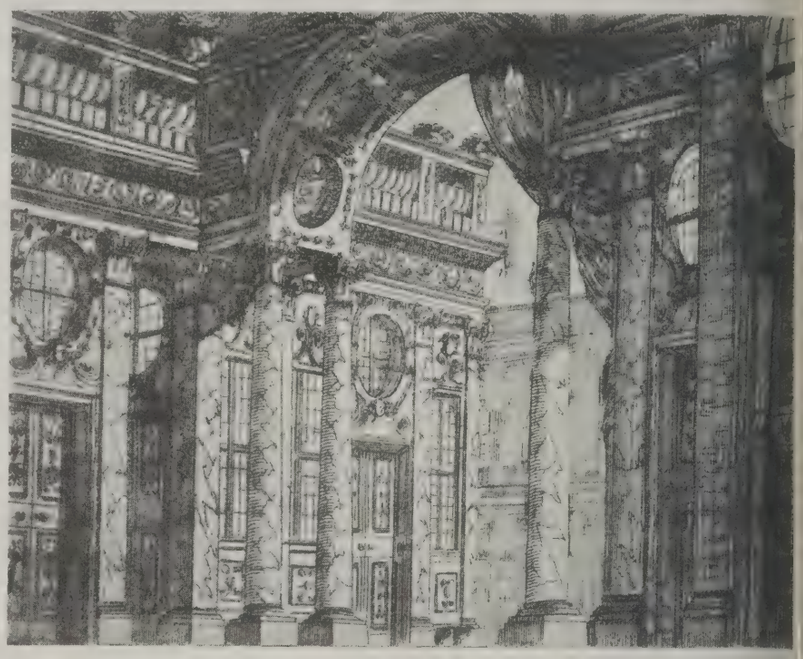
Compare from left to right, and you will see the scene by the Russian is a facsimile of the scene designed in 1690 by Bibiena. Note the door—its knobs, its pattern, the oval window-frame, the second window (half shown), the second door (half shown), the corner pilaster, the frieze above it, now the arch supported by four columns, the balustrade seen through the arch.

If the Russian affair had improved on the Italian seventeenth-century work the adaptation had been a mere bagatelle, but is it not vastly inferior to Bibiena's beautiful little Atrio ?

I hope that critics will before long turn their thoughts to the study of the Italian and other stage history and look up a few authorities; they may then come to see that the English public receives under a Russian name too much that is not Russian at all.

This is an example of what I meant when I called for fair play in the theatre game in my recent book, "The Theatre Advancing."

Faithfully,
GORDON CRAIG.



A DESIGN BY FERDINAND GALLI DA BIBIENA (CIRCA 1690.)

Rapallo.

M. Léon Bakst replies as follows :—

SIRS,—Monsieur Gordon Craig me fait grand honneur en cherchant en vain une étroite ressemblance d'une partie d'un des décors de "Sleeping Princess" avec un croquis de Bibiena — je ne demanderai, que de lui ressemble le pl possible. Mais si-même je m'hasardais copier un décor de Bibiena — il sorti fatalement un Bakst de pure espèc même au défi des lunettes jalouses Monsieur Gordon Craig.

Je le souhaitrais de tout cœur pour s décors à lui (si jamais il en a peint) - mais, j'ai grandement peur . . .

Yours faithfully,
LEON BAKST.

A STAGE SETTING OF "THE SLEEPING PRINCESS."

Mr. H. B. Cresswell's Views on "The Commercial Ideal"

NCERITY is too noble a thing to be passed unheeded, and idealism too rare a quality to remain unfelt. Cresswell is an idealist, and he was sincere when he spoke on the comcial ideal at the Architectural Assoion. It is important in reading his ress to realize this, for otherwise the ds may lose all that simple dignity force which they had when spoken man who was voicing what he held e a matter of grave moment.

ne could see with Mr. Cresswell that matter in hand was not a mere ing matter. It was something deeped, something which he had felt with erness for a long time, something t he would speak of above all other gs. Those before Mr. Cresswell not realize to the full how very nest he was; and it was not until he lied to the discussion that one knew t the matter meant to him.

Ir. Cresswell, in the course of his re-ks, said: The circumstance that has led to jump into your laps was the appear-e last year of Mr. Gordon Selfridge upon se scenes. Mr. Selfridge brought us a ssage which we may suppose to be one he newest truths known to American eil trade. The message was that hitecture pays the shopkeeper. That ays him as an advertisement. This ssage, having regard to its source, is irely satisfactory from our point of w, for it is typical of the modern comcial ideal, and it forms a suitable peg on which to hang my discourse.

eracity of Thought and Action"

am not going to preach a sermon, but m entitled to ask of a community of ng men entering on the threshold of areer in an Art and a profession, that should approach this subject not in thin, starved light of expediency, but that of robust, clear-eyed English nhood. And since I have reminded of a message from America, based the commerical ideals of that remarke country, let me remind you of the ssage of an Englishman who had hing to do with commerce, and who nt his life not in the pursuit of terial power and gain, but in devotion a similar plane of ambition—for ence and Art are on the same plane—that which brings us together under s roof. "Civilization," he said, "can vance only along the lines of veracity thought and action." Those simple rds not only bear the impress of truth ve know they are true—but they nd in the mind like the voice of doom. e words have special weight, for I am oting Thomas Huxley, who, above all n, abhorred unction and platitudes, d was contemptuous of doctrinal igion.

Before I say more of the general ques-n I should like to dispose of this pro-sal to "boost" architecture by inocu-ing shopkeepers with the idea that hitecture pays as an advertisement. the first place the shopkeeper knows much better than we can tell him what is good for him.

The proposal is to institute an intensive culture among shopfronts; to impose a true architecture where a false has planted itself, and dignify purposes which lack dignity by the glamour of an Art whose forms, so far as they are esteemed, owe their expressiveness to the glorious traditions with which they are associated. The proposal is to deck out the relative squalor of shops with the borrowed glories of Greece, Rome, Italy, and so on. Gentlemen, the thing cannot be done.

Art and Utility

The beauty or majesty of a building does not depend upon its gratifying prejudices of the eye, but upon its raising stimulating trains of meditation in the mind, as Ruskin pointed out more than sixty years ago. Why can a factory chimney by no art be made beautiful, and a lighthouse scarcely escape beauty when no æsthetic principles have been involved in its construction? Why can architecture have nothing to do with refuse distructors or sewage works? Why does it boggle hopelessly with slaughter-houses and crematoriums? Why could no one hope to design successfully a municipal public baths in fourteenth-century Gothic? The reason is the one Ruskin stated as an Axiom applying to all building: architecture cannot clothe mean or ugly purposes, or express a building in forms of which the tradition is repugnant to the purpose of the building. The proposal we are considering is, then, to use architecture to camouflage shops so that their frontages shall raise false trains of meditation by obscuring the undignified and trivial, or even mean uses of the building; and that to do this will raise the repute of architecture.

Now, the commercial ideal is subversive of all that gives dignity to life, and of nearly all that makes life worth living; it is in direct antagonism to the spirit which has endowed civilization with the glories of Art, Science, and Letters; it would have made impossible any of the achievements of great men in service to humanity which the world remembers with admiration, gratitude, or even respect; it is destructive of all those influences which have, in the past, bestowed upon mankind such nobility as human nature has attained; and, wherever it rules, the principle of "veracity of thought and action" will scarcely raise its head out of the mud.

How, then, can it be, I asked myself, that an Association of young men should swallow down Mr. Selfridge's dose without any signs of restiveness or after-pains? There is only one explanation; that, living in a world in which popular usages, the conventions of thought, the public conscience itself is saturated with the commercial ideal, which is increasingly invading the Arts, Sciences, and the Professions. You are, perhaps, not aware of the objectionable savours of the times in which you live—just as a gas-fitter is the last man to notice a smell of gas. The true state of affairs is clear enough to anyone who has not floated like a straw with the stream, and who can look back a score or even a dozen years. Mine is not a voice raised in the wilderness. I say that every man who is worth the clothes he stands in is on our side. The best the world holds of men and of causes is on our side; but the commercial ideal, like an octopus, is getting its tentacles surely about us and stifling the pure motives of humanity, and in particular are its effects seen in the Arts, Sciences, and Professions.

Let us look at what is now about us. Almost without exception, wherever you see pretentiousness, shoddiness, ignorance—all, in fact, that is comprehended in the word "ugliness" in buildings you will find an immediate explanation in the motive, and that motive will prove to be some aspect of the commercial ideal; and, almost without exception, when you see buildings that you can accept as architecture, you will find that their motive is free from complicity with the commercial ideal, advertisement, display, pretentiousness, shoddy material, ignorant taste—all these things would scarcely exist if it were not for the commercial ideal in which they have arisen, and by which they are nourished.

The subject admits of endless illustration and comment. I will confine myself to one—not by any means the most deplorable or aggressive—of the impositions of the commercial ideal upon architecture. I refer to its treatment of housing. The garden village is a philanthropic idea—practical, and rightly so: but based, as is every idea that is worth considering, on the human ideal. It was a reaction against exploitations under the commercial ideal; and, of course, directly the conception of the garden village as a worthy thing became popularly known, the shrewd hard-headed man we all love so adopted the term, to give a deceptive gloss to his own speculative schemes.

Effacing Natural Beauty

However, what I want to call attention to is housing before the garden village idea—Raymond Unwin's idea rejuvenated us with hope of better things. You may see in the suburbs of London and of the provincial towns places where the shrewd hard-headed men of England have effaced all natural beauty of their country by infection of the peculiar qualities of their own souls. These districts have grown by the same inscrutable laws which direct and control the ravages of mange on a dog's back. They have grown without thought; without knowledge; without plan or expectation or hope or ambition; they have merely eaten their way down the valley or up the slope of the hill and left their scars far and wide.

To sum up: the commercial ideal is loading the world with products of Art and manufacture; organizations; ideas, habits, tastes; customs; which have no

justification except that they are incidental to the acquisition of money by individuals. Mankind must produce in order to consume, and the individual must work to live, but the natural impulse of human nature the human ideal demands of a man that he shall justify himself by producing what is of service to man, or what is beautiful, or what in some way expresses his individual aspirations for the destiny of humanity—that is the natural instinct in man.

You must know that the commercial ideal, as exemplified among commercial houses who deal with the productions of artists, is tending to squeeze the artist out of existence. The publisher tries to enslave the author by binding him under one contract to as many as seven books, the music publisher and concert agent strives to secure a monopoly by compelling singers to sing only songs published by him, madly making use of the powerful position thus secured to force the song-writer to disadvantageous contracts. The position will one day be reached when the architect or decorative artist will have great difficulty in existing individually unless he makes use of commercial method to flaunt himself into notoriety—and what sort of artist will that man be?

As to what we can do to combat this poisonous ideal, which I hope is as detestable to you as it is to me, why, we can do a great deal! We can acknowledge its existence. That is the great point; to keep restlessly aware of the false, ugly thing, to refuse to accept it as inevitable, to refuse to float like straws down the current of life till we find ourselves in a mud-hole. Let us, then, test things, examine motives, tear the false thing out by the roots; proclaim the stupid hypocrisy; wave it in the air; expose it; ridicule it; and denounce it in thought, in our confidences with friends, in our conversation with acquaintances, and on public occasions. So may we alike honour the memory of the men who have given mankind its proudest heritage, ourselves, and our calling.

Discussion.

Mr. Reginald Hallward, in proposing the vote of thanks, said that he shared with Mr. Cresswell the views that he held. He knew that they grew out of Mr. Cresswell's own consciousness and honesty. He had never heard any such statement given with such force and sincerity. He wanted the younger men to take nothing for granted; the things of which Mr. Cresswell spoke were very real things. They were with us now. As to Mr. Cresswell's remarks on Mr. Selfridge and commercial buildings, he would modify those views in saying that a building could be good by the very expression of its purposes, whatever they were. For that reason the architecture of the North of England had a special meaning for him, maybe because he knew those parts better than any others. Those gaunt, black factory chimneys of the north had great power and dignity; they had all that bitterness of expression which was in the lives of those who work around them. When an architect expressed the uses of a building it was lasting. Professor Lethaby made a very grave and important statement when he said that he had asked himself whether it was possible for an architect, if he carried out his ideals, to live at all. It was our business to get to know the people better. The people were not base, they were deceived.

Mr. Maurice E. Webb thanked Mr. Cresswell for his paper, but said that he could not follow it all with agreement. It was the job of the architect to design shops. They were a nation of shopkeepers, and the architect must help the shopkeeper. In the old days, when the Italians built in all their fineness and grandeur, and the painters painted the masterpieces for all time, religion was the great motif; to-day the shops were the great motif. The position of the architect in this respect was quite justified. He felt that Mr. Selfridge has done a great deal for architecture, both by night and by day. By day his magnificent shop was a testimony to good work, and by night its architectural attractions were shown to advantage. There was one thing that they could all do, and that was to see that Art did not get absorbed in commerce. Sir Charles Ruthen has said that architects must drop Art in the National Housing Scheme. He did not believe that the public would stand that. Architects would never admit that a beautiful thing was necessarily an expensive thing.

Mr. T. S. Tait said that the speaker was hard on Mr. Selfridge. Shops and their management were the shopkeeper's business. To his mind young architects should not ignore commercial problems, but tackle them.

Mr. H. T. Buckland said that there was one thing which would have given added enjoyment to the evening, and that was for Mr. Selfridge to have been announced half-way through the meeting. He was sorry that Mr. Selfridge was not there to present the other point of view.

Mr. Ackerman said he could not speak as an architect, as he happened to be an engineer. When he was over in New York he was pleasantly surprised to find that the tall buildings were not the monstrosities they were held to be. Certainly their offices were a great deal more comfortable than ours; they were often lined in marble; and in spite of Mr. Cresswell's dislike of marble, he found these offices immensely attractive. The commercial ideal consisted very largely of judging a man by his banking account. But the rich man became of little account to posterity. His name was lost and forgotten. If he were to ask whether they could give the names of fifty millionaires who have lived, or who were alive, the answer would be no. Yet they would have no difficulty in naming fifty men great in art and letters.

Mr. Cresswell, in reply, thanked them all for the way they had received the paper, but he was deeply conscious that it had completely failed. He felt as if no one in the room had understood him. That was not their fault, it was his, and he greatly regretted that he had not the power of words to make them understand and bring home to them that matter as he felt it. They had misunderstood him in thinking that his remarks were directed against commerce. He had said nothing against commerce; what he had spoken of was the commercial ideal. He had said the ideals of commercialism were bad, they were a bad influence, they were a bad standard, they were poisonous to artistic growth. They were rotting England; and because of these false ideals everything was becoming a humbug and a sham. It was because they were living in a light coloured by the bad practic of their time that they could not perce this. This was a matter of conscien with him. The evil of the whole thi was that they could not in these days g in touch with the men that mattere their normal avenues of approach to the were so controlled and stifled that wh they did emerge they were mangled o of all semblance to their real selves.

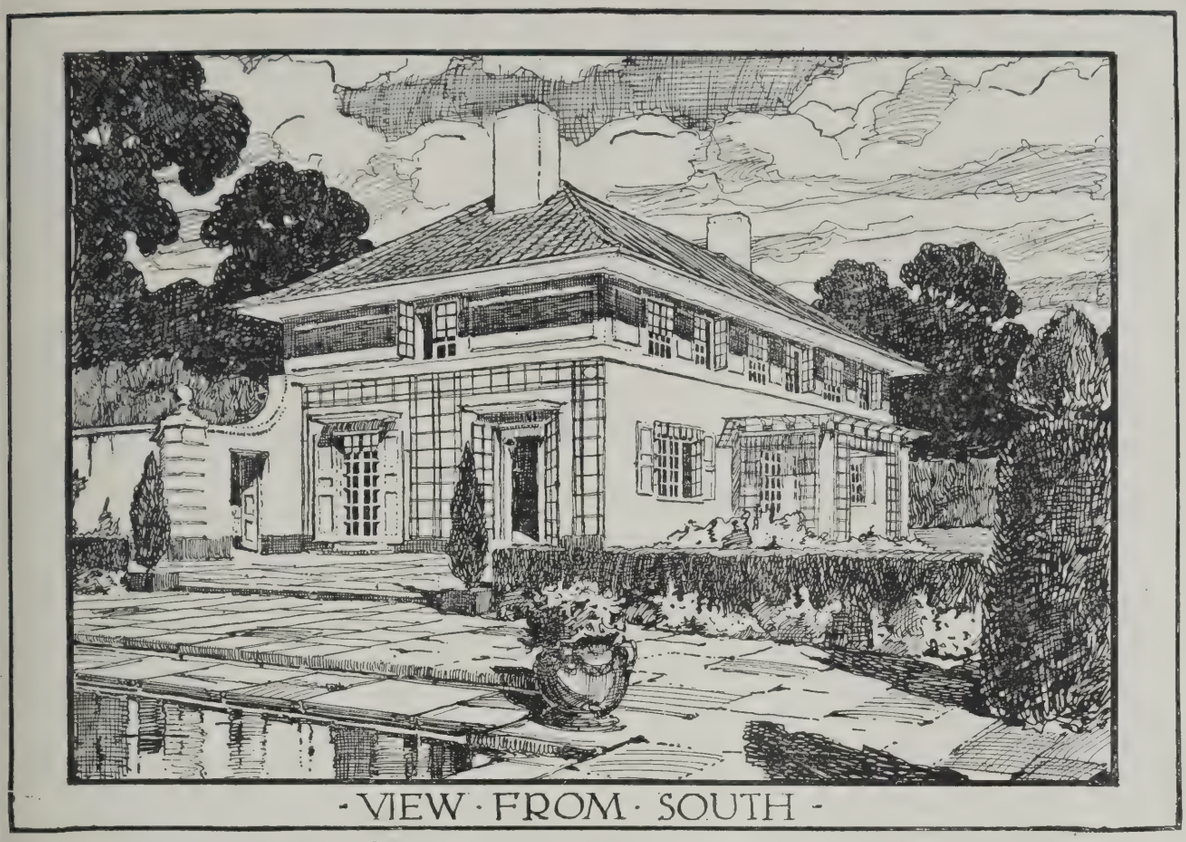
The inventor, the artist, the write and the composer came to them on through the medium of exploitation b the business man. That was sufficient give some indication of the speake mind and his attitude in treating th subject. He had no feeling again Mr. Selfridge in particular. It was th point of view that he spoke of. The da ger was that Mr. Selfridge's type of mir would predominate. The change w already coming over them. Compa England before the war with England no But when one looked back a score years one could not fail to be deep pained at the great change that has con over us as a nation. Every idea that th world had cherished, every great thoug that it had remembered, was made i truth and sincerity for the sake of th good that was in it, and not for selfis or material ends. Mr. Webb said tha they were a nation of shopkeepers. H knew that they were in a commerci age. Yes; that was the very devil of i They were artists, and men of feelin and professional men. So far they wer men not warped in their motives. Th speakers in the discussion on the pape took the practical point: "What am going to do if I am asked to design shop?" He could only say that the would have to glorify that shop. But h would ask them to combat the commerci ideal and restore the human ideal.

F. E. T.

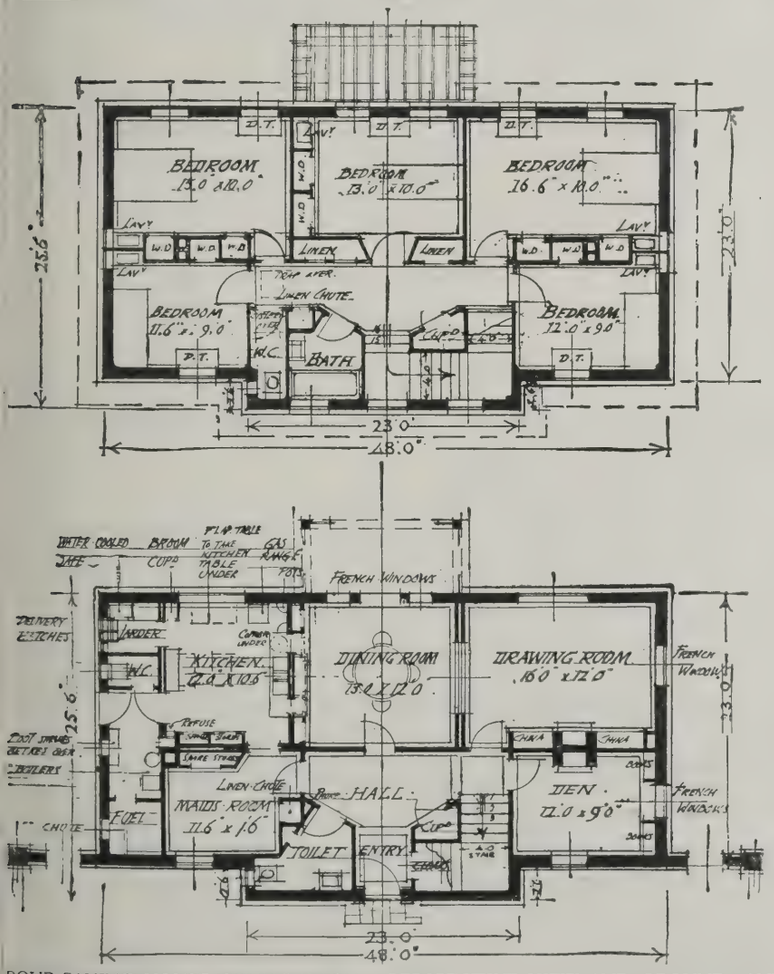
"The Daily Mail" Labour-Saving House

In this issue we illustrate the design o Mr. P. D. Hepworth, A.R.I.B.A., E.D.B.A which has been awarded first place i "The Daily Mail" Labour-saving Hous Competition. The assessors were Messrs E. Guy Dawber, vice-president R.I.B.A. R. W. James, M.I.M.E., A.M.I.C.E., an Mr. Bertram Parkes, whose awards wer as follows: First prize (£300), Mr. P. D Hepworth, A.R.I.B.A., E.D.B.A.; secon prize (£125), Mr. P. D. Hepworth an Mrs. J. Dreschfield; third prize (£75) Mr. Alfred Williams and Partners. Briefl the chief points to be considered by th competitors in designing the house wer as follows: One servant; no coal fires no carrying of water to bedrooms; n space wasted on passages; soiled linen chute from first floor; refuse chute fron kitchen to outside removable bin; n bright surfaces to polish; no squar corners to attract dust; central heatin and electric fires.

The assessors state that "The problen set by 'The Daily Mail' was a difficul one: to design a compact and well arranged house of reasonable capacity with a suitable and well-considere elevation, and embodying a system o labour-saving appliances and equipmen that will materially help in the workin



- VIEW · FROM · SOUTH -



BOUR-SAVING HOUSE COMPETITION: PERSPECTIVE VIEW AND GROUND- AND FIRST-FLOOR PLANS OF FIRST PREMIATED DESIGN.
P. D. HEPWORTH, A.R.I.B.A., ARCHITECT.

of the house. The cost of upkeep and the utilization of these labour-saving arrangements were factors to be considered from an economic point of view.

"One of the conditions stipulated that the house was to be suitable to the suburbs of a large town or city, with water, electric, and gas supplies assumed—a condition that to a certain extent simplifies the planning, but also prevents the utilization of many of the plans in country areas where these amenities are not available.

"The design placed first is simple and direct in arrangement, with but little space wasted in passages, thus saving the occupants unnecessary transit from room to room. The elevations are harmonious and well balanced, and the house, when erected on a suitable site, should look well. The details of the various fitments, cupboards, and the like show careful thought and are admirably worked out."

The approximate cost of the house was laid down at £2,500, but the assessors' opinion that to build from any of the designs submitted—there were 382—would call for an expenditure of not less than £3,000, was confirmed by two quantity surveyors.

Criticism of the plan can be confined to the hall. How is this to be lighted? The rest of the rooms appear to be airy—almost too airy for winter with all those French windows—but that would only accentuate the well-like darkness of the hall, the light to which either filters down the staircase or through the front door. Rather a pleasing feature is the juxtaposition of drawing-room and dining-room with wide folding-doors between, which enables the two rooms to be thrown into one when parties are required. The resulting feeling of spaciousness is greatly to be sought for in a small house where living in small rooms literally encourages people to live small lives.

E

R.I.B.A.

Council Meeting.

The following notes are from the Minutes of the last Council Meeting of the R.I.B.A. :—

Higher Buildings. — It was decided that the question of higher buildings should be discussed at the General Meeting on March 6. The London Building Acts Committee was thanked for its services and discharged.

The Victoria and Albert Museum.—It was decided to urge the authorities of the Victoria and Albert Museum to return to the hours of opening in force before the war.

Architects and the National Housing Scheme.—The following resolutions were passed and ordered to be communicated to Sir Charles Ruthen and to the Press :—

(1) That regarded as the utterance of the President of the Society of Architects, this Council considers that it has been adequately and appropriately dealt with by the Council of the Society.

(2) If it may be viewed as the utterance of a Government official, the opinion of this Council is that it is an undignified departure from the best traditions of the Civil Service, as well as an unwarranted attack from an official quarter upon a whole profession whose interests the R.I.B.A. is pledged to protect, and those in higher authority are invited to give consideration to it.

(3) That though the charges are so general and expressed with so much animus as to be unworthy of serious attention, the Council, in view of the fact that they were the utterances of a Fellow of the Royal Institute, has called upon Sir Charles Ruthen, either to present to the Council such definite allegations as will enable it to take its own proper action, or to tender a complete withdrawal.

Exhibition of British Architecture in Paris.—The Council decided to undertake the financial responsibility for the Exhibition of British Architecture at the Paris Salon in the summer of 1922.

Architects' and Surveyors' Assistants' Unemployment Insurance.—A sum of £25 was voted to meet the expenses of preparing the scheme for an Unemployment Insurance Society.

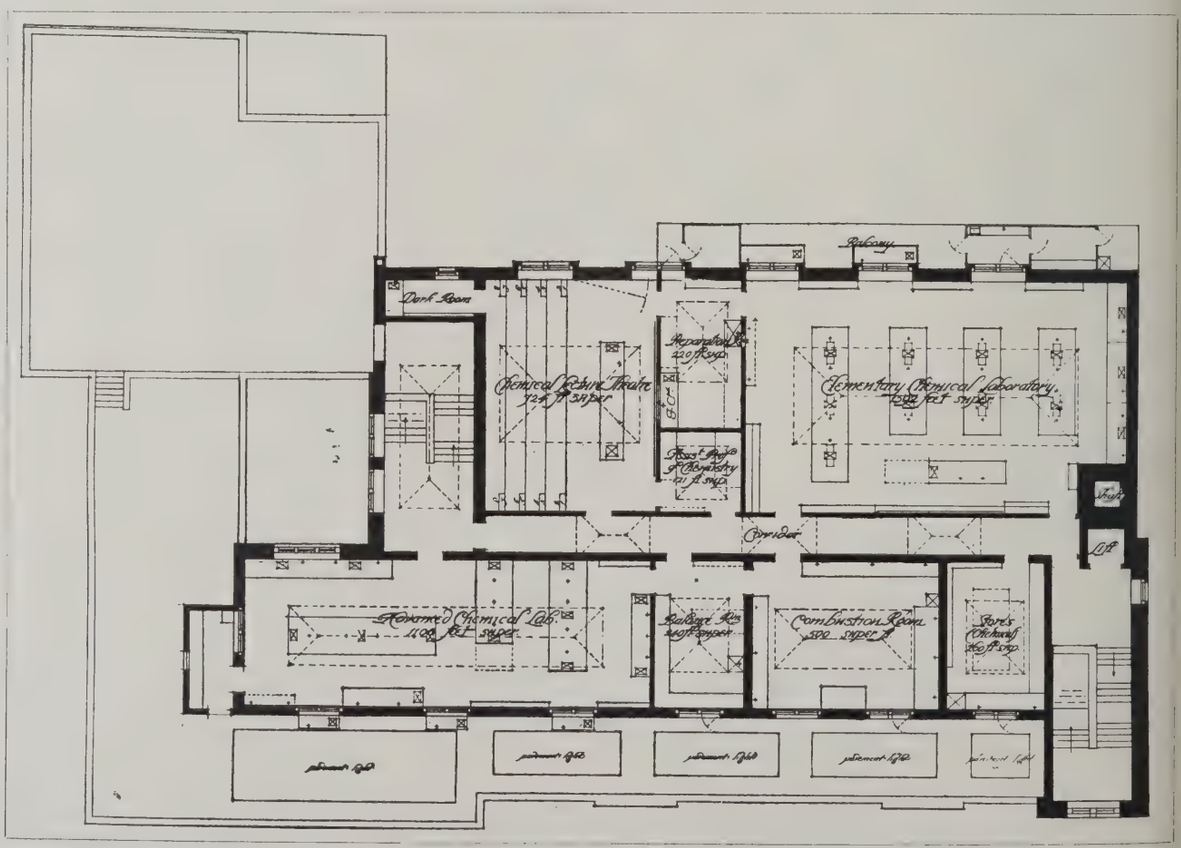
The Cambridge School of Architecture. —A donation of £50 was voted in aid of the funds of the Cambridge School of Architecture.

Students' Evening at R.I.B.A.

About sixty students from the schools of architecture were present at the special students' evening at the exhibition of prize-drawings in the Galleries of the R.I.B.A. Mr. Maurice E. Webb, D.S.O., M.C., showed the students the drawings submitted in the different competitions, and gave valuable information on each. Mr. Webb held a brief discussion with the students on the subject of the prizes and studentships system. The following was contributed by Mr. F. E. Bennett, a second-year student : One could not help feeling a little disappointed with the exhibition of prize-drawings at the R.I.B.A. The anticipation of seeing work representing the highest standard among students was rather damped, and it was felt that many men one knew might have made a better show. The drawings for the Owen Jones prize attracted first attention by reason of the vigorous colourings. Some of these proved to be extraordinarily vigorous, and caused even the most young to take a sharp breath, while the suggested mosa treatment of the new museum at Sou Kensington gave its fair share of shoc The businesslike designs for the Airsh Mooring Mast provided some interesti constructional ideas, while the "bi designs for the Soane prize showed mu diversity of treatment, the winner havi a very fine plan and a distinct treatme Messrs. Pierce and Armstrong's Ro prize drawings did not harm by bei seen again.

Details of Science and Technical Buildings

The double-page illustration shows fume closet placed between a lectu room, from which it is hidden by a slidi blackboard, and the preparation-roo On account of its convenience in provi ing for the possible immediate needs the lecturer in the one case, and of thc of the occupants of the preparation-roc in the other, this arrangement has mu to recommend it, provided that amp light can be obtained for the fume clos (See plan.) The fume closet, as illustrate contains a sink and waste, with gas a water laid on, and also a down-dra pipe. The floor is tiled. Details a also shown of the sink and waste to t preparation-room referred to above. complete dark-room, with sink and rc tap, lead-covered bench, gas standa and shelves, is shown. Light-proof ve tilators are provided, all woodwork painted dull black, and the door stops a lined with felt. These illustrations fo the twelfth of the series of drawings science and technical buildings specia prepared for the JOURNAL.



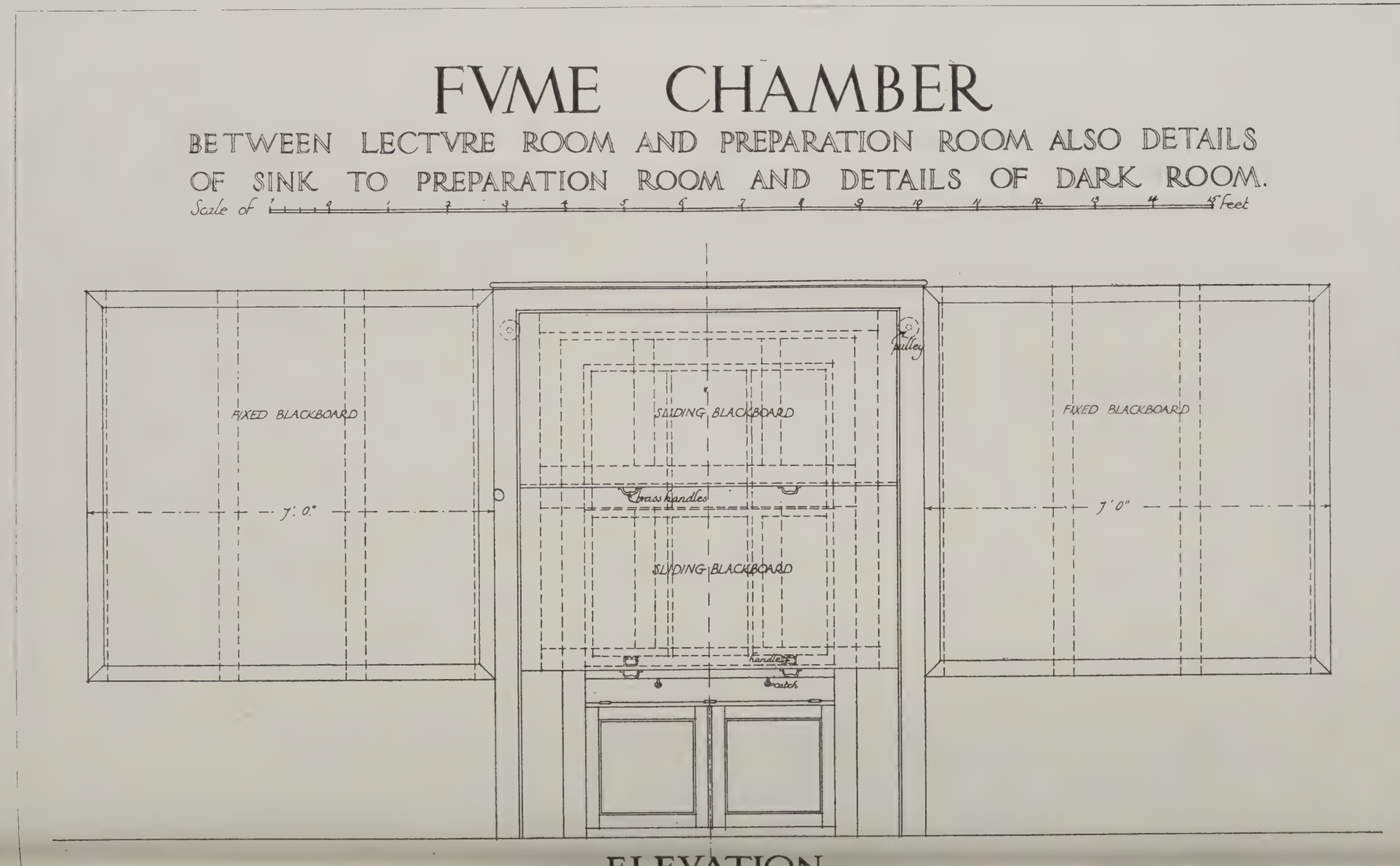
PLAN OF A CHEMICAL LABORATORY. A. W. S. CROSS, M.A., F.R.I.B.A., AND KENNETH M. B. CROSS, M.A., ARCHITECTS.

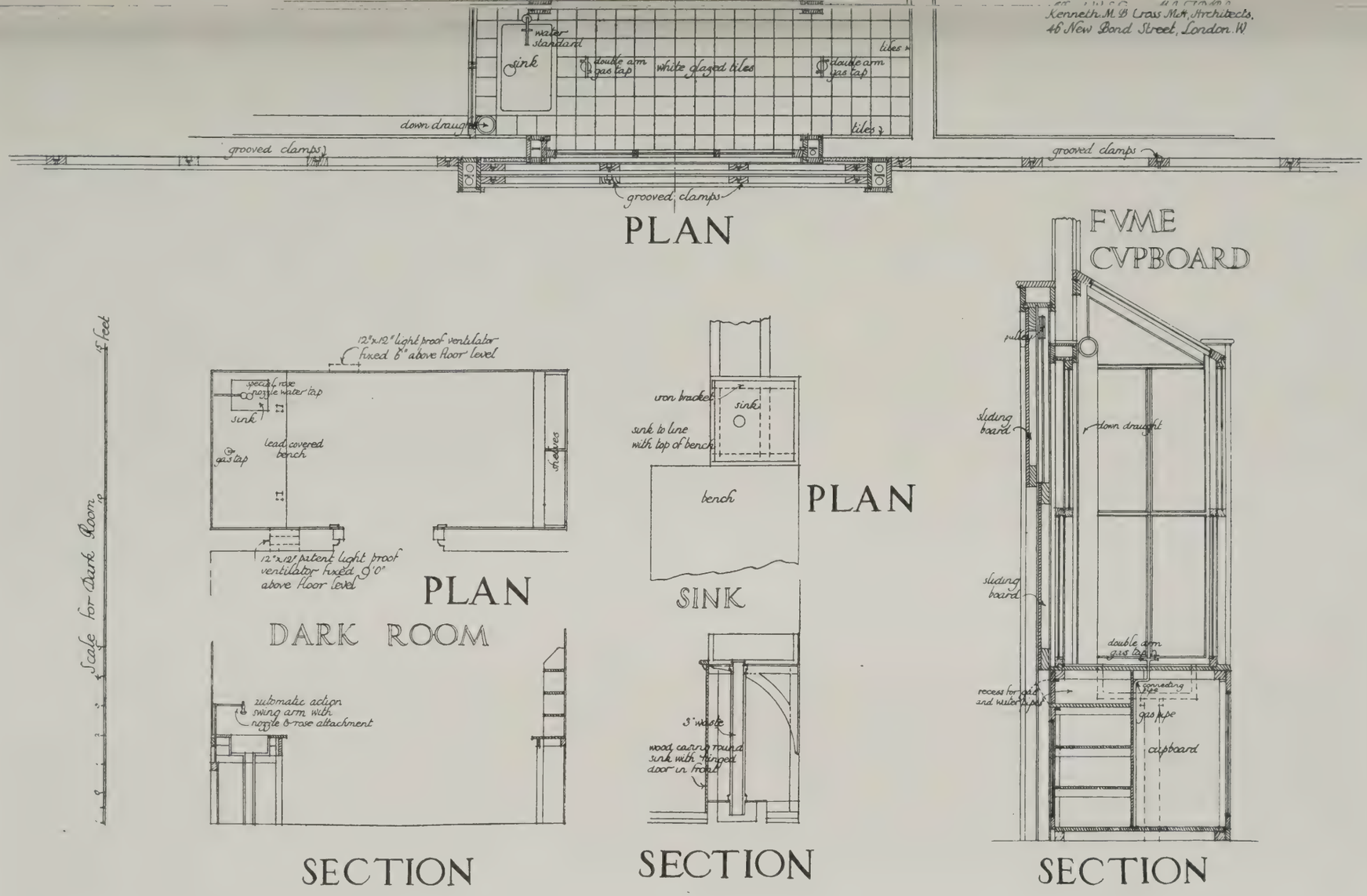
(*See also Double-page plate.*)

Practical Notes for Architectural Draughtsmen (Series II) Technical Schools and Science Buildings.

12.—Fume Chamber, etc.

A. W. S. Cross, M.A., F.R.I.B.A., and Kenneth M. B. Cross, M.A., Architects





These illustrations, particulars of which are given on page 236, show a fume chamber placed between a lecture-room (from which it is hidden by a sliding door) and a preparation-room. This arrangement, on account of its convenience in providing for the needs of the lecturer on the one hand, and for those of the occupants of the preparation-room on the other, has much to recommend it, provided that ample light is available for the fume chamber.

The Architectural Revue"

t would seem that "The Architectural ue" has firmly established itself as ardy annual, for it is again blossoming y in the garden of youth, which is ver Street way. Dropping metaphor, us come to the hard fact that the ling of the "Revue" would make lier stare and gasp, and send bibulous Roger Payne to seek consolation at t for him was its wonted source. But ugh the façade be shabby, the delightful oration of the interior makes amends. pening the "Revue," the first thing ountered is an engaging experiment he recently resuscitated art of wood-raving. Apparently the wood-cutting been achieved with a pen-knife. It n artist's instrument. When, some e in the 'eighties, wood-engraving ame obsolescent, it would not have e out of favour so completely simply ause "process" was cheaper and ker. Wood-engraving was "snuffed " so suddenly because there was no in it. The engraver suffered severely n his facilities. He had too many s, and was too dependent on them for effects. He overworked the burin, the ge, and, above all, the roulette. Frank ngwyn and the "Revue" artist do h better with a pen-knife, which keeps r work simple, sincere, and direct.

n the whole the illustrations to the evue" are distinctly good, and a high lity is maintained throughout the . Forced humour is avoided; and "editorial" with which the annual s is, for this type of production, sually serious in tone. The function he "Revue" is expressed with quiet sincerity. "Records are always valuable," the *apologia* runs; "and whatever other purpose this paper may serve, it does record, not so much individual talent . . . as personalities. Contributions are individual, though the whole, we may hope, is a key to the life and outlook of the school, and, what is more valuable, yet another vent for self-expression." Dr. Birch could not have addressed himself to his "Young Friends" with more scrupulous propriety; and there is a graceful reference to the memory of the generous founder of the Bartlett School, who died last year.

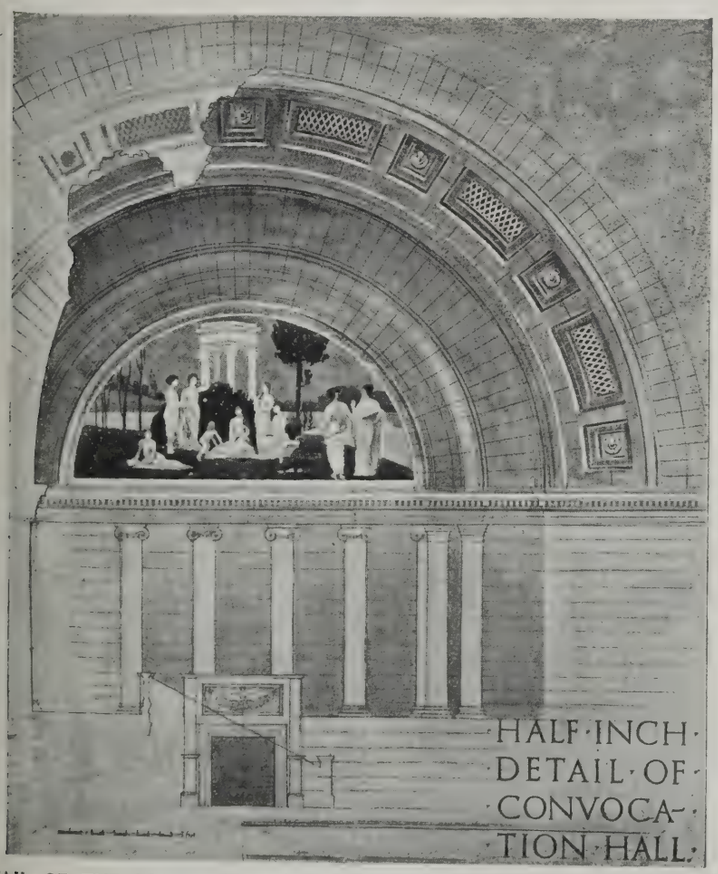
Jam immediately follows the pill; a rollicking "correspondent" contributing a remarkable interview with one Mr. Dicksboy. This contribution is very funny indeed, and hits off deftly some alluring traits of character in the victim of the interview.

The verses in the "Revue" are not particularly good. In each case it may be said that the materials are all right, but have been carelessly measured up.

A serious prose essay entitled "Criticism" is quite good, in spite of its slightly parabolic form. Parables and allegories are exceedingly difficult things to manage. "The Recent Battle on the Studiovakia Front" is so close and so clever an imitation of well-written war-correspondence that the vividly realistic description of a bloodless (we trust) battle between students becomes here and there quite thrilling. A buoyant article on "Uncle Sam, Advertiser," shows a remarkable command of the resources of the professional humourist. It argues, very ingeniously, that Uncle Sam, chief of advertisers, is the lineal descendant of Samson, "who took two columns and brought down the house." This is surely a topsy-turvy argument, for Samson is hardly Sam's son; and advertisements do not bring down the house, but build it up. Very brilliant is the skit on the American story, which one has to chase over hedges and ditches, overcoming many formidable obstacles such as Kutest Kandy for Kids, the Wunnerfullest Kut Koat in all Kansas, Potted Peas with a Punch, and so forth, until the denouement is finally reached. Capital fun, with a punch in it; but it is not easy to see what architectural bearing it has.

As we have already said, the art is excellent. L. T. Sloot has a very clever adaptation of a Bateman series, Mr. Sloot showing the "Awful Fate of a Man who used a book for his Esquisse." The rest of the art is quite good. Some of it is excellent. In "Crème de Menthe's" caricatures the faces are faithful portraiture; it is the clothes that are caricatured, and that not much. The best thing in the book is "The Deadlock, or the Architect who believed in Educating the Public." The extremely well-contrasted faces and figures of the pair show the hopelessness of attempting agreement. It were hard to say which of the two is the finer study—the vulgarian with the big cigar (band in situ) and the shiny silk hat which he has lacked the manners to remove, or the architect who seems ready to go to the stake for principles that the Philistine has failed to appreciate. It is a fine character study. There is not a picture in the book that is undeserving of praise, did time and space allow.

"The Architectural Revue," 1921. The Bartlett School of Architecture, London. [For private circulation only.]

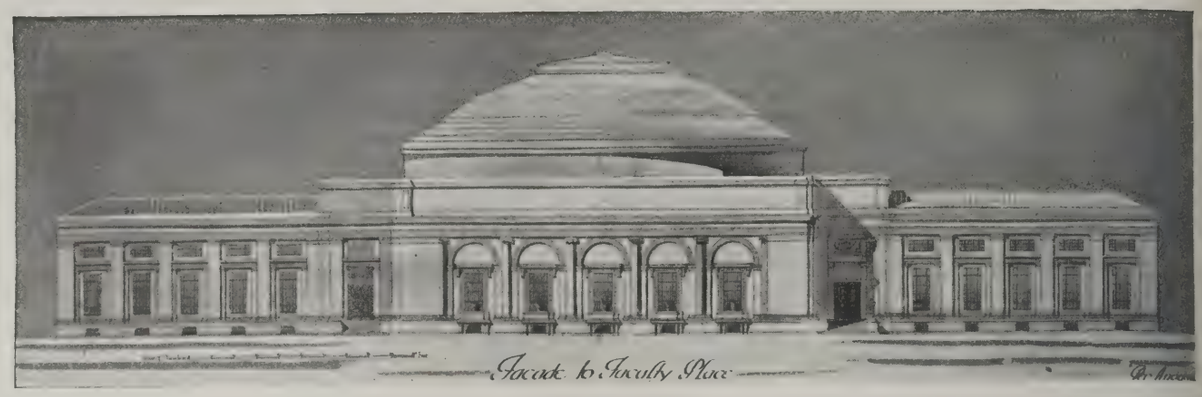


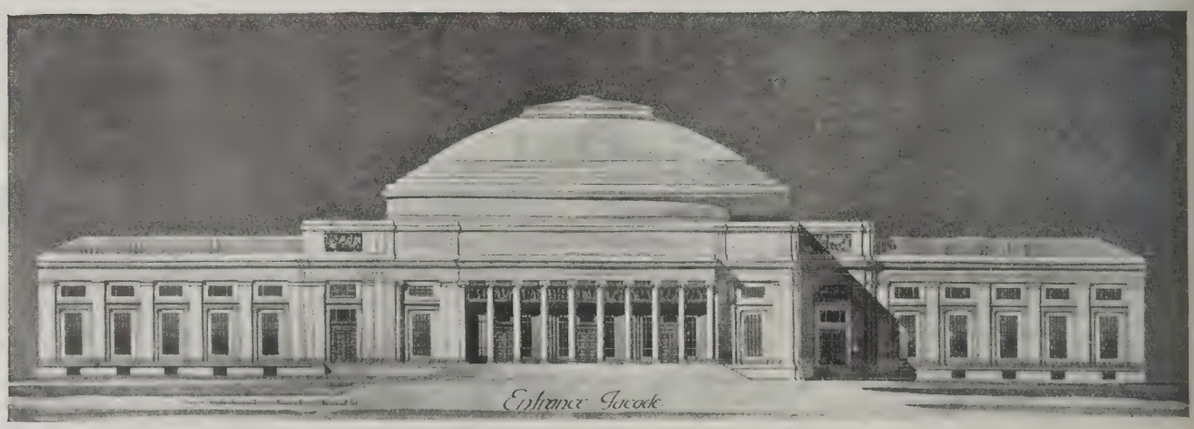
ETAIL OF THE SOANE MEDALLION WINNING DESIGN. BY ALFRED J. BROWN
(*See following pages.*)

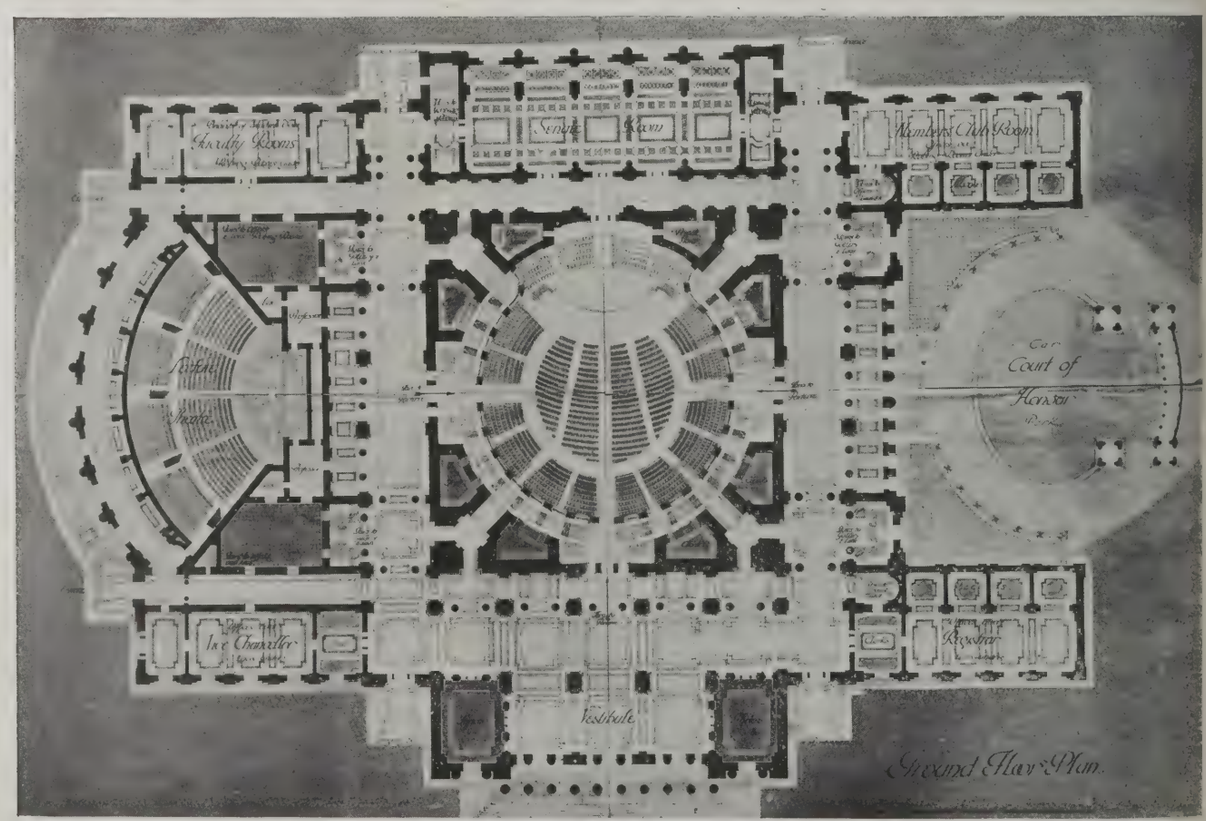
Funeral of Ernest Newton

A very large number of architects and artists attended the funeral of the late Mr. Ernest Newton, R.A., at the Golder's Green Crematorium on Saturday last. Among those present were Messrs. W. G. Newton (President of the Architectural Association) and Harold Newton; Sir Aston Webb (President of the Royal Academy); Sir John Burnet, A.R.A.; Sir Bertram Mackennal, A.R.A.; Mr. C. L. Hartwell, A.R.A.; Professor E. S. Prior, A.R.A.; Sir Ambrose Poynter; Sir Banister Fletcher; Messrs. Ian MacAlister (Secretary of the R.I.B.A.), F. R. Yerbury (Secretary of the Architectural Association), John W. Simpson, and Mervyn Macartney, Professor Lethaby, and Messrs. Arthur Keen, Guy Dawber, Gilbert Scott, Stanley Hamp, William Woodward, Harrison Townsend, Frederick Chatterton, Stephen Ayling, Rudolf Dircks, and Northover. The chapel was filled to its utmost capacity, and the numerous floral tributes and garlands which surrounded the coffin included those sent by the Royal Academy and the Architectural Association.

At the last meeting of the Council of the Society of Architects the following resolution took precedence of all other business: "That the Council of the Society of Architects deplore the death of Mr. Ernest Newton, and desire to express their sense of the loss occasioned thereby to Art in general and to the art of Architecture in particular, and also their appreciation of his personal and professional qualities, and his invaluable service to Architecture and to the community."

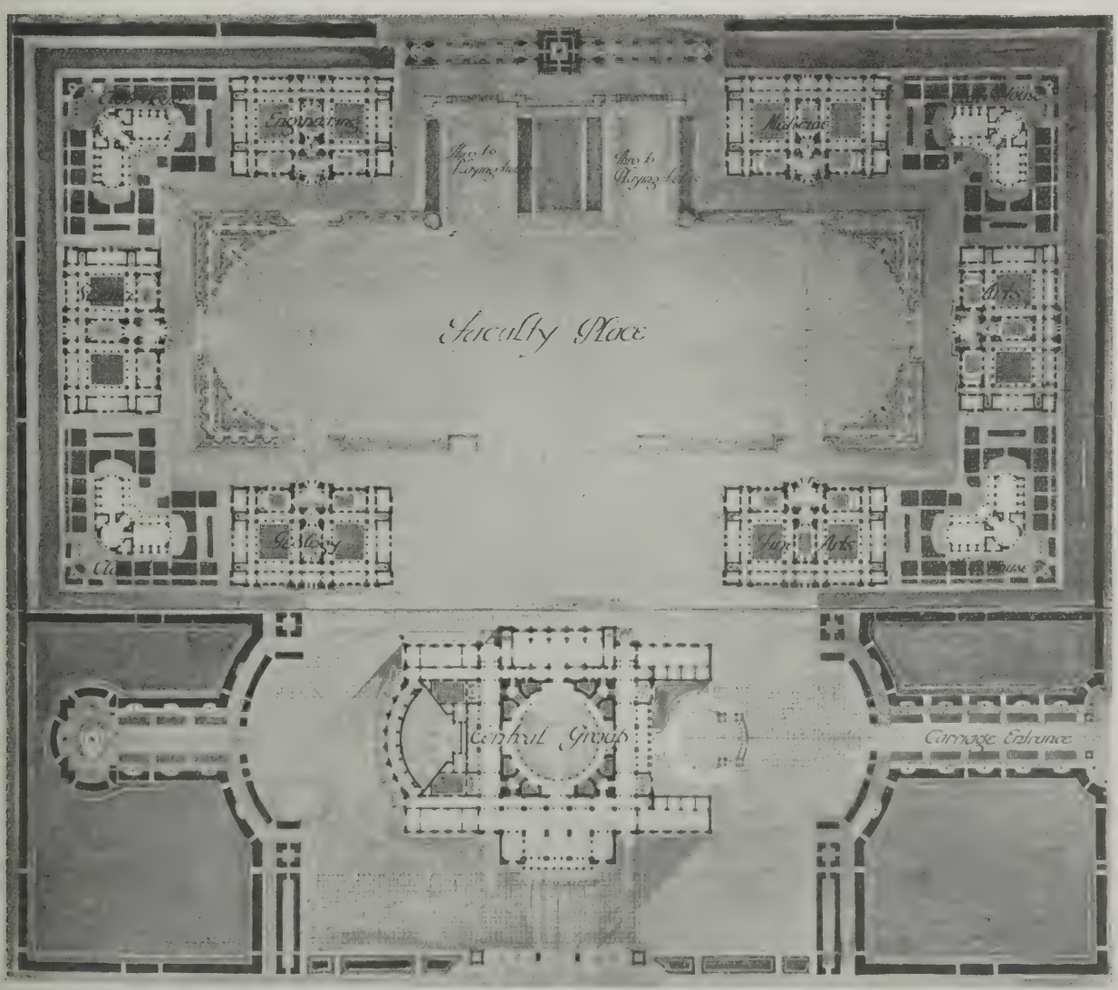






THE SOANE MEDALLION COMPETITION: WINNING DESIGN, BY ALFRED J. BROWN

(See Mr. James Burford's critique in last week's issue)



THE SOANE MEDALLION COMPETITION: WINNING DESIGN, BY ALFRED J. BROWN

(See Mr James Burford's critique in last week's issue)

Correspondence

Viscount Knutsford on the City Churches

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—At the risk of being voted a bore, I feel constrained to answer the question put by Mr. Arthur Keen in your paper some time ago and repeated in another paper last week.

He asks me whether I do not realize that "the City churches have a value to those who appreciate their beauty and associations, comparable to the value that they might possess as places of worship if efforts were made to meet the changed conditions that have arisen?"

I cannot say I do realize this, because, to own up, I do not understand it. My fault, no doubt; but the question seems a little involved. What am I to compare? On the one side the supposed beauty and associations of these churches. On the other a state of things which does not exist. In other words, I have to compare the existing with the non-existing. I give it up.

But I say without anticipating contradiction, except from men who make a fetish of anything simply because it is old, that many of these forty-seven churches have no line of beauty outside or in, and that the associations formerly connected with them are as dead, and as impossible to resurrect, as the associations originally connected with Stonehenge.

Further, let me remind Mr. Keen that where in any church which was recommended to be pulled down there was anything of special beauty or of architectural interest, it was to have been preserved in situ, or elsewhere, if the recommendation of Lord Phillimore's Committee had been carried out.

In dealing with this question of the City churches one has also to answer the men who make speeches appealing to sentiment rather than sense. You know the sort of thing. "Is it nothing to Lord Knutsford that here in these churches, standing so beautifully silent and empty, we have a dignified and noble protest against the selfish sordid seekings of the money-grubbing City men who rush to and fro past them unheeding and ignorant of the great advantage to their bodies and souls, if they could but bring themselves to pause a moment and enter these beautiful Houses of God, calling in their very desolation on man for his sympathy," and so on. (Tears and "Hear, hear.") Let Mr. Keen read "Noodle's Oration" in Sydney Smith's essay on "Bentham's Fallacies," and he will find a model for a speech on City churches—and just the type of speech which would "carry" any meeting.

No one can expect to convince people who have what they flatter themselves into believing to be an artistic temperament. These people see what they want to see in everything, like the enthusiastic Cubist who raved about the beauty of the picture of his host's wife in the bathroom, only to learn from his indignant host that the picture was a plan of the drains! I ask any who are not endowed with artistic temperaments, but with some common sense of beauty, to go and see All Hallows, Lombard Street, which is said to be of priceless architectural beauty, and let them judge for themselves. It is by no means the worst.

Mr. Keen writes: "In the hands of the Y.M.C.A. a use for the City churches would quickly be found." What, for all the forty-seven? For the three in the 250 yards of Lombard Street? For the two within 80 yards of each other in Cornhill? For the £40,000 a year spent to-day on their rectors and upkeep? For the millions in the value of their sites?

Mr. Keen may have a true sense of architectural beauty, but if his private conduct is in keeping with his public suggestion, he will find himself studying the architectural details of Brixton Gaol from within. What possible justification could there be for taking endowments and property given to the *Church* for the service of God and handing them over to another body to use for dances, draughts, and whist drives, and the other giddy endeavours of the excellent Y.M.C.A.?

Lastly, and typical of the sort of argument which one is expected to succumb to, Mr. Keen quotes an eminent American architect, who declared that London is far more beautiful than Paris—Amen. But Mr. Keen actually goes on to give it as his opinion that London will not maintain this character if we sacrifice these churches, Our London's character must indeed rest on hidden merits. Why, most of these churches, except for their steeples, are built out of all sight by shops and banks. They cannot be seen from outside, and very few people ever see them from inside.

Let the empty rectories, the unwanted churches and their sites be sold. Let the money be used by the Church for the service of God in poor parishes where such service is impossible to-day for want of funds. Let some of this money and the stipends now paid to these sinecure rectors (after they have been compensated) go to supplement what we to our shame call "livings," but what more rightly should be called "starvings," where there is real work to be done amongst poor people in crowded churches.

Yours faithfully,

KNUTSFORD.

Kneesworth Hall, Royston.

(*See Editorial Comment.*)

Competitions

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Thanks to the efforts of those responsible for the regulations governing architectural competitions, the conditions of entry—for the more important works, at any rate—are as good as anyone could wish for.

The usual immense amount of time and labour is freely given by the many sportsmen who joyfully enter the arena secure in the conviction that if Mr. So-and-so is acting as assessor everything will be all right.

But what happens when the assessor has made his selection and has gone home?

On two recent occasions in connection with important war memorials the names of the winners have not been announced to all competitors; the only intimation being a short circular letter—contained in an open envelope—stating that one's design has not been awarded a premium.

This is a Spartan age, and I am far from suggesting that those "taking the knock" should be provided with feathe beds to fall back on; but would it n be more in keeping with the spirit of t game if the "Funeral Card" method ga place to an announcement which wou enable us at any rate to slip round a congratulate the winner?

"PALMAM QUI MERUIT FERAT."

The Cost of Cottage Building

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In the account you publish your issue for February 1 of a forthcomi publication of the Building Resear Board there is a slight inaccuracy whic although it would be hardly wor troubling about in the lay press, requi correction in a professional journ especially in view of the emphasis given

The figures in the report will not sh that bricklaying labour represents or third of the total cost of the house, b one-third (bricklayers 17.1 per cen bricklayers' labourers 16.3 per cent) the total cost *of labour* on the hou Similarly, the proportion of bricks nearly one half the total *materials, weight;* costs are not dealt with in t diagram, as weights are of more gene use, and easily convertible into money.

I should be much obliged if you wou publish this correction to save cor spondence.

H. O. WELLER,
Director of Building Research

Heraldry in Connectio with Architecture

Mr. W. Gurney Benham, F.S. lecturing before the Birmingham Arc tectural Association on "Heraldry connection with Architecture," said t the rules of heraldry were fairly easy master, but the art presented m difficulty, and it was largely owing to modern neglect of the artistic capabili of heraldry that it was not more us It could be made delightful to the and the mind, and could be made to g expression and language to buildi Mr. Benham illustrated this by a se of lantern views showing examples heraldry as treated by such great art at Albert Dürer. He also displayed w he described as a lifelike and recogniza portrait of Sir John de Birmingham, w was born in the thirteenth century, m tioning that his armorial "coat" forr part of the Birmingham City Arms.

Examples were given of the humou heraldry and its use in expressing commemorating history, national local. A picture of the Birmingham Arms was shown, and the lecturer ur his hearers to give the city armor more artistic and effective treatment t they had received. Mr. Benham gav striking example of the wealth of mean which lies unsuspected in many coat arms by expounding the ancient boro arms of Colchester, dating back to t early years of the fifteenth century. simple device, as he showed, combi no less than five mediæval legend great interest.

A vote of thanks to the lecturer a proposed by Mr. A. Harrison, F.R.I.B and seconded by Mr. B. J. Fletc

Law Reports

mportant Rating Question

Appeals by Manchester Contractors.

Jan. 18. Manchester City Sessions.
Before the Recorder, Mr. A. J. Ashton.

hese appeals were made from rates ied by the Manchester Overseers in pect of buildings erected upon sites ere housing contracts are being carried . The appellants were Messrs. Jack- n Brothers, Tinker and Young, Ltd., rmanton and Sons, Ltd., R. Carlyle Co., Sir R. McAlpine and Partners, H. Bardsley, and G. and W. Smith, o were represented by Mr. Wingate il, K.C., and Mr. Moxon. Mr. Langdon, C., and Mr. J. E. Balmer appeared for Overseers.

Ir. Langdon said that there were ven appeals, and as certain features e common to all it was convenient take them together. A number of er cases before the Assessment Com- tee would be governed by the Re- der's decision.

he Manchester Corporation, in carry- out large housing schemes on various s, made contracts with the appellants, ch in some cases would not be com- ted for several years. To carry out the k more conveniently the contractors effect transferred to the sites—or in case to within a very short distance— ortion of their building yards; they ted structures of wood, concrete, and k, to be used as offices, store-rooms, s-rooms or canteens, mortar mills, ers' shops. Obviously, it was con- plated that the occupation would be ng one, and the buildings were of a d and substantial character. The rseers, acting on advice given to m, had rated those premises. It was mitted that the buildings were in the eficial occupation of the persons whose es appeared in the rate books in ect of the hereditaments, and were sequentially rateable.

he question of beneficial occupation ended on the construction of the ute 43 Elizabeth. It meant that the on rated must be in occupation of the nises and receiving benefit from them out being subject to any general trol by a superior landlord or other on; moreover, the occupation must ntended to continue for a more or less nded period, and not be of a transient are. If those conditions were fulfilled d not matter whether it was a tenancy will or a tenancy by sufferance. The on who had exclusive control of nises, subject to any special rights rved to anyone else, was liable to ated. In this case it appeared from notice of appeal that the suggestion that the builder was not in exclusive session, and that the Manchester poration were the persons who should ated.

r. Wingate Saul said his contention that his clients were not liable to be d. He reserved the right to argue the occupation by his clients was ogous to that of an agent.

r. Langdon described the buildings, called Mr. Henry Price, the city itect, who stated that the Corpora- did not do repairs, or clean, or exer- any control over the buildings. In s-examination he said they were desirable for the completion of the contracts. It was not absolutely necessary to put ironmongery and articles of that description in a covered store, but the Corporation considered it advisable.

Mr. Wingate Saul said in the case of the Holywell Union *v.* Halkyn Drainage Company (1895 Appeal Cases), Lord Davey laid down this principle, that if a person had only a subordinate occupation, subject at all times to the control and regulation of another, that person had not an occupation, in the strict sense, for the purposes of rating. Here it appeared from the general conditions of the contract that no part of the work was to be commenced without a written order from the city architect, it was to be done according to his directions, he could decide where the buildings should be placed, and order their removal if he thought fit. The contractors were bound to obey his instructions. The buildings were paid for by the Corporation, they became the property of the Corporation, and the contractor was prevented from removing them while the work was in progress. These facts clearly showed that the contractors did not have exclusive occupation, because the control was in the hands of the Corporation. It did not matter whether the control was exercised or not, what the Court had to look at was that there was power to control. Previous to this case, with one exception, no Assessment Committee had had the bravery to attempt to rate contractors in respect of buildings of this sort.

Mr. Langdon submitted that the contractors were in possession of the sites, and the use they made of the buildings could hardly be distinguished from that made by a man who was carrying on work in his own yard. Numerous legal authorities were cited on both sides, and the Recorder reserved his judgment, intimating that he would give it in the form of a special case.

Builders and Cancelled Contract

Tredegars, Ltd. v. Hammersmith Distillery Co., Ltd.

Jan. 28. King's Bench Division.
Before Mr. Justice Sankey.

The cancellation of a building contract formed the basis of an action brought by Tredegars, Ltd., builders and contractors, Westminster, against the Hammersmith Distillery Co., Ltd. The case for plaintiffs, as outlined by Mr. Colam, K.C., was that they were invited to make a tender for certain work in accordance with a plan submitted. That offer was accepted, but after work had commenced the district surveyor made certain objections which necessitated a revision of the plan. At defendants' request plaintiffs were instructed to submit another drawing calculated to meet the proposals and requirements of the local authority. It was pointed out that the cost would be increased if the district surveyor's suggestions were embodied in the substituted plan. After the second drawing had been prepared and submitted the contract was cancelled by them. Plaintiffs claimed £154 loss of profit.

For the defence it was contended that it was an implied term of the contract that neither party should be bound should it be found impossible to construct the building in accordance with the specifications.

His Lordship, in his judgment, held that plaintiffs were entitled to assume that the consent of the authorities had already been secured. The difficulty arose because the defendants had prepared and submitted a substantial plan from the rough sketch of the architect. The contract was not legally prohibited, and there must be judgment for the plaintiffs for the amount claimed, with costs.

Builder's Claim—Disputed Liability

Jan. 31. Official Referee's Court.
Before Sir Francis Newbolt.

Taylor v. Welby.

This was an action in which Messrs. H. and J. Taylor, builders, of 177 Lewisham High Road, claimed from Mr. A. R. Welby, of Gordon Place, Tavistock Square, architect, who with his mother owns several houses in Lewisham, the sum of £148 2s 2d. for work done and materials supplied in respect of repairs at 6 Granville Park, Lewisham.

Mr. Shore, appearing for the plaintiffs, said that the amount of the claim did not appear to be in dispute, and the preliminary issue to be tried was one of liability, as according to the defendant the work was done without his instructions. It was clear, said counsel, that instructions were given. The plaintiff firm had been employed to do certain structural alterations in one of the Lewisham houses to convert it into flats. John Taylor was the proprietor of the builder's business, and while he was away out of the country Henry Taylor held a power of attorney for him. He was not a member of the firm, but was acting as agent. During the structural alterations the bottom flat became vacant, and Henry Taylor, wanting a flat for his son, approached the defendant with regard to renting it. It was, however, very much out of repair, and defendant told him to do the work, offering to let the flat to him for £2 a week. He (defendant) told Mr. Henry Taylor that he knew the firm and would trust them to do what was necessary and he would pay.

Mr. Jolly, for the defendant, said that the business was with Mr. Henry Taylor, and not with the firm, and having failed to come to terms in regard to payment, he stood upon his strict legal rights and repudiated any contract with the plaintiffs. Mr. Jolly said that defendant had offered to pay something, which was not accepted, and he therefore stood upon his rights. There was very little between them, and it was really now only a question of costs.

The Referee suggested that the parties might, under all the circumstances, like to consider their position and see whether a settlement could not be arrived at instead of adding £60 or £80 to the cost by adjourning for evidence as to the details of the work done.

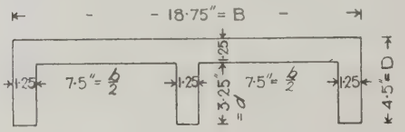
After a consultation the parties decided to take an adjournment for the purpose of considering whether they could act upon the Referee's suggestion.

Enquiries Answered

Strength of Cast-iron Stanchion.

J. K. writes: "In attempting to ascertain the safe load for a cast-iron wall stanchion (of the section as shown, 11 ft. 6 in. long, with small cap and broad sole plate) I employed Gordon's formula in conjunction with the relative "table G" in Rivington IV, p. 114 (taking one end as being fixed and one free), and obtained the result of twenty-nine tons approx. Checking the above by means of Table V, page 332, of above volume, and taking the stanchion in two portions, "a" and "b," as per sketch, I got for answer somewhere about fifty-eight tons. I should be glad to know which of the above formulæ is dependable (if either). According to a note under "table G," the first figure should be *reduced* to secure safety."

The cross section being as in accompanying illustration, the length 11·5 ft.



=138 in. and least width 4·5 in. the stanchion will be $\frac{138}{4\cdot5} = 30\cdot67$ diameters long. By the writer's approximate rule the safe load up to 32 diameters long will be one ton per sq. in. The sectional area is $1\cdot25\,(18\cdot75 + 3 \times 3\cdot25) = 35\cdot625$ sq. in., therefore the approximate safe load will be 35·625 tons.

By Gordon's formula, assuming constant $f = 7$, $a = \frac{3}{320}$, we have

$$W = \frac{Af}{1 + a\left(\frac{l}{d}\right)^2} = \frac{35\cdot625 \times 7}{1 + \frac{3}{320}\left(\frac{138}{4\cdot5}\right)^2} = 25\cdot4 \text{ tons safe load,}$$

where a factor of safety of 6 is allowed.

By Rankine's formula

$$W = \frac{Af}{1 + \frac{l^2}{acr^2}} = \frac{35\cdot625 \times 6\cdot7}{1 + \frac{138 \times 138}{2 \times 1600 \times 1\cdot526}}$$

=48·7 tons. Average, say, 36 tons safe load. The use of Rankine's formula requires some considerable calculation to find the radius of gyration, which cannot be obtained from tables. It is found as follows. First for the moment of inertia

$$I = \frac{(BD^2 - bd^3)^2 - 4 \cdot BDbd(D-d)^2}{12(BD - bd)}$$

$$\frac{(18\cdot75 \times 1\cdot5^2 - 15 \times 3\cdot25^2)^2 - 4 \times 18\cdot75 \times 4\cdot5 \times 15 \times 3\cdot25(4\cdot5 - 3.25)^2}{12(18\cdot75 \times 4\cdot5 - 15 \times 3\cdot25)}$$

$= \frac{23230}{427\cdot5} = 54\cdot36$ in. units. Then the radius of gyration squared

$= \frac{I}{A} = \frac{54\cdot36}{35\cdot625} = 1\cdot526$, which figure is inserted in Rankine's formula above. The 6·7 for f is 60,000 lb. crippling stress in lb. divided by 2,240 for tons and by 4 for factor of safety.

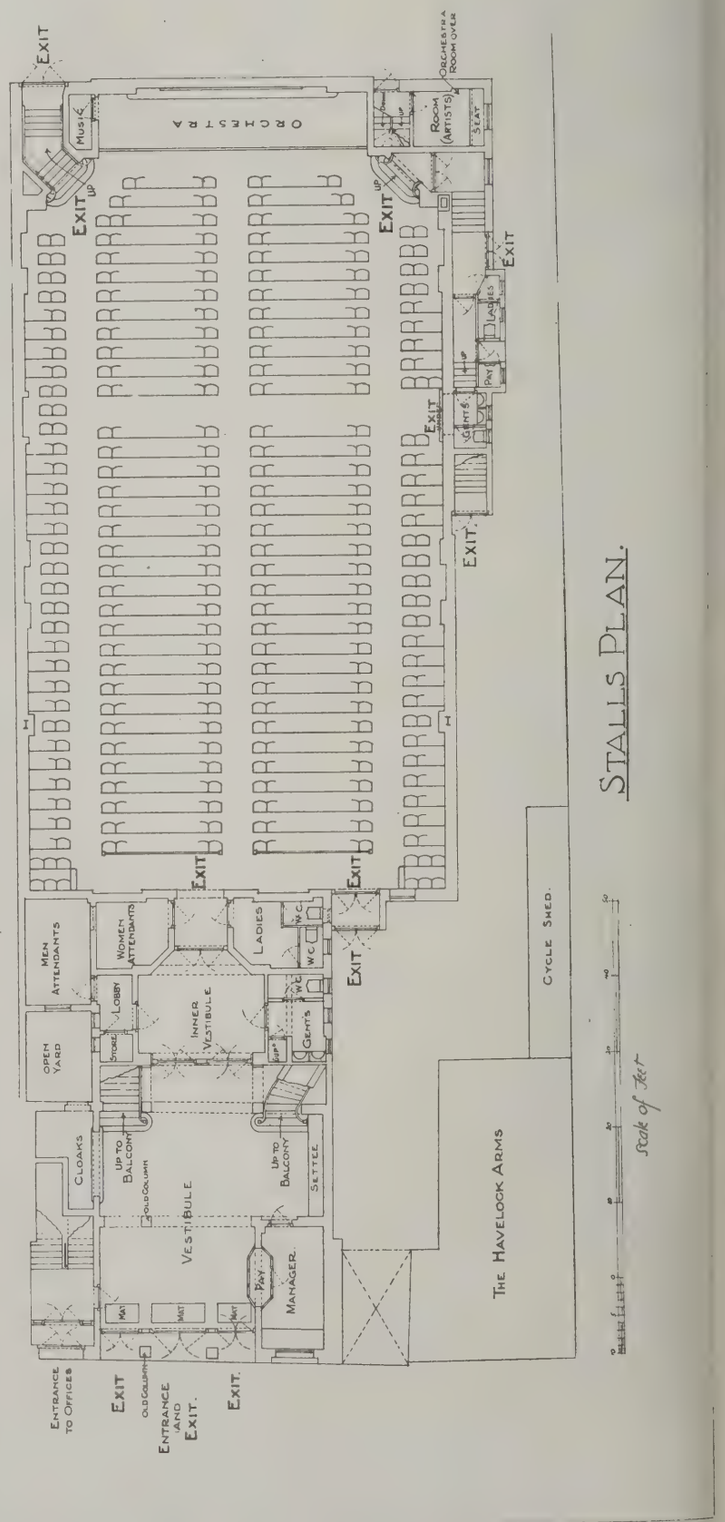
HENRY ADAMS.

Removing a Restrictive Covenant.

"Preston" writes: "In the event of a landlord verbally agreeing to remove a restrictive covenant, on consideration of a money payment, is it possible to force the landlord to submit the question of amount to an independent arbitrator, if the sum required by the landlord in the first instance is considered to be an exorbitant one?"

—Fortunately there is no such law as the question suggests. The parties made a certain bargain which is binding upon both of them, until it is altered by mutual consent; and if the negotiations break down, the original bargain continues in accordance with the contract as it has always been. May I remind the enquirer that arbitration is a two-edged weapon, and should be used with the greatest discretion. If the parties both agree submit a matter to the decision of third party, they must have the terms "submission" carefully put into writin and they must further insert a clau making the decision binding on the both, however hard or even foolish it ma turn out to be. My advice is, "do yo own business yourself."

F.S.I.



VESTIBULE.

The Palace Cinema, Slough

This cinema has been erected in High Street, Slough, from the designs of Messrs. Frank Matcham & Co., architects. The cinema, which seats 1,100 in the stalls and balcony, is of fireproof construction. Internally the treatment is of a plainer nature than most cinemas, the main ornament being the large paintings between the piers on either side. These were from the brush of Mr. Rushton, principal of the Ipswich Technical College. The fibrous plaster decorations are of the modern classic type, the walls are of brick, the circle is of concrete and steel, and the roof, which is constructed on steel trusses, is slated. The cinema is well furnished and carpeted, and fitted with chairs of a very luxurious type. The entrances were formed out of existing shops, behind which the hall is built, and flats have been formed over the vestibules in the old building.

The general contractors were Messrs. H. D. Bowyer, of Slough; the sub-contractors associated with the work being as follows: A. Dawnay and Sons, Battersea (steel work); R. A. Marshall, Clapham (plumbing and sanitary work); Edison Swan Electric Co., Ponders End (electric light fittings); "Veronese," Fulham (fibrous plaster work); A. R. H. Maxted, Bermondsey (art metal work, gates, railings, handrails, balusters, etc.); Cecil Cooper & Co., London (electric light wiring); Gas Co., Slough (gas fixtures); Yannedis & Co., London (door furniture—locks, electric bell plates, etc.); A. F. Jones, London (folding gates, shutters, etc.); J. Whitehead & Co., Kennington Oval (mosaic decoration and marble work); R. A. Marshall, Clapham (heating and ventilating apparatus); Lazarus and Son, London (furniture); Beck and Windibank, Birmingham (upholstery); Shoolbreds, London (carpets, floor coverings).

Publications Received

"English Church Monuments A.D. 1150–1550. An introduction to the Study of Tombs and Effigies of the Mediæval Period." By Fred H. Crossley, F.S.A. Price 40s. net. B. T. Batsford, Ltd., 94 High Holborn, London.

"A History of Architecture on the Comparative Method." By Sir Banister Fletcher, F.R.I.B.A., F.R.G.S., F.R.S.I. Sixth Edition, rewritten and enlarged. Price £2 2s. net. B. T. Batsford, Ltd., 94 High Holborn, London.

"Common Commodities, Industries: Wall Paper." By J. Whiteley Ward. Price 3s. net. Sir Isaac Pitman and Sons, Ltd., Parker Street, Kingsway, W.C.2.

THE PALACE CINEMA THEATRE, SLOUGH.
FRANK MATCHAM & CO., ARCHITECTS

A Dew Reservoir

The accompanying illustration shows an ingenious dew reservoir, which has been invented by Mr. S. B. Russell, F.R.I.B.A., to provide against future droughts and scarce supplies of water. This reservoir provides means not only for storing the water obtained by condensation from the atmosphere in a manner to avoid appreciable loss by evaporation, but also for promoting the condensation of further moisture. To achieve this a radiating surface for the condensation of water from the atmosphere is arranged above a tank, or cistern, for the reception and storage of the condensed water, with a heat insulator interposed between the radiating surface and the cistern, which is sunk slightly into the ground on a site elevated somewhat above its immediate surroundings, but not necessarily on high ground. The surface excavation is used to form sloping banks surrounding and shielding the sides of the cistern which protrude above the ground. Heat insulating materials are also employed for the construction of the cistern to isolate it thermally from the earth.

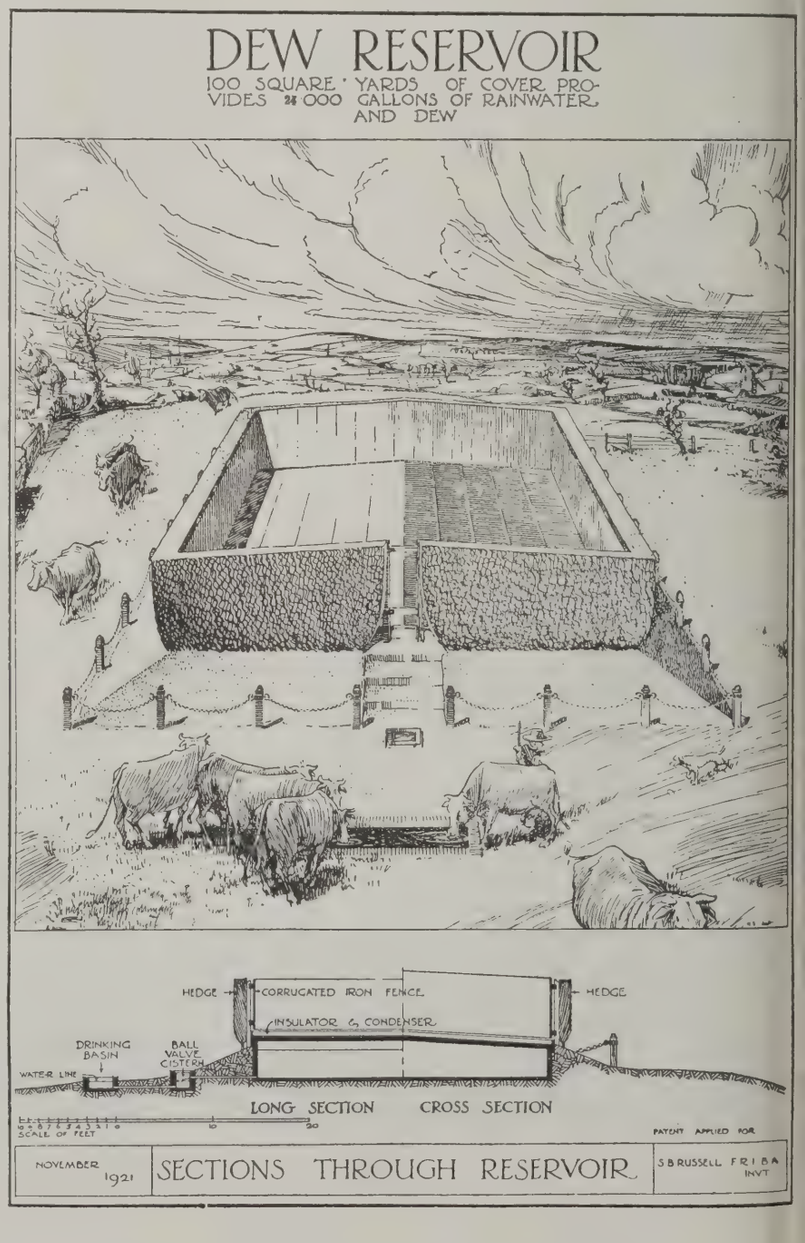
The water in the cistern is not only protected from loss by evaporation, but since it is condensed and stored at a low temperature it keeps the still air above it and the underside of the insulator in a cold condition. Thus there is a mutual assistive interaction, whereby loss by evaporation of acquired water is prevented and the insulator of the radiator is maintained in a cold condition effective to prevent any flow of heat to the radiating surface when this has chilled to the condensing temperature. The radiator cover to the cistern is constructed with sufficient slope to allow the condensed water to drain readily into the cistern below, thus keeping the radiator in a condition suitable to promote further condensation. The protective fencing round the cistern is also constructed to act as a condenser, being provided with radiating surfaces overhanging the cover, on to which the water, condensed on the fencing, drips. Mainly for appearance sake, but also because of the cooling effect of vegetation, the fencing should be surrounded with a small-leafed evergreen hedge.

An experimental dew reservoir, embodying these essentials, and having a cover and cistern area of 25 square yards each, has recently been constructed near Hitchin. It has been in operation since the beginning of November, and has already collected a considerable quantity of water. During the foggy weather at the end of that month water was condensing all day, but at night a coating of ice was formed; while on ordinary evenings the cover began to condense water as soon as the grass.

The efficiency of the condenser will increase in a much greater ratio than an increase of its area, and it is estimated that one with a cover of 100 square yards would collect 24,000 gallons of dew and rain in the Eastern Counties in the course of a year, and, with a storage capacity of 12,000 gallons, could furnish an average daily supply of 120 gallons during the hot summer months and 50 gallons a day for the remainder of the year.

Water would be supplied by gravity to the place where it would be required for domestic purposes or for animals, thereby saving much labour and cost in pumping from deep wells and carting the water. Once the apparatus is installed no further expense would be involved and no attention required. By its means a supply of pure water can be provided in many districts where none has been obtained before, especially in times of drought, for it not only stores the water condensed from the atmosphere, but collects all the rain that falls on its cover, which possesses no attractions for birds or insects. An open position, some little distance from trees, should be selected to avoid dead leaves being blown on to the cover and there decaying.

The cost of a dew reservoir depends on the accessibility of the position where it is required; but, apart from exceptional cases, it would always be below the capitalized cost of a well, pumping, and carting, and it is the cheapest and most effective method of obtaining a constant supply of pure water. The reservoirs can be made in standard sizes from 100 square yards to 484 square yards, with a reserve storage capacity of from 12,000 to 60,000 gallons.



New Bridge Over Tham

The work of constructing a new bric over the Thames, in the place of t existing Streatley and Goring Bridge, to be begun at once. The new brid which will be constructed, with the ception of the wooden parapet, entir of reinforced concrete, is designed so to preserve, as far as possible, the appe ance of the old wooden bridge. T design was shown by the engineer, Lieu Colonel J. F. Hawkins, to the King a Queen at Buckingham Palace on March 1915, when the design of the propos Albert Bridge at Windsor was submitt for their approval. On June 24, 1915, t "Streatley and Goring Bridge Act, 191 gave powers to the Commissioners build a new bridge, but owing to the w the whole scheme was postponed. T bridge, which is on the system of t Trussed Concrete Steel Company, is to built by Messrs. A. Jackaman and So of Slough, Bucks, under the super tendence of Lieut.-Colonel Hawki county surveyor of Berkshire, and M A. E. Cockerton, P.A.S.I., county su veyor of Oxfordshire.

Waste Heat from Electrical Generating Stations

Mr. F. H. Whysall, M.I.E.E., in reading a paper on the "Utilization of Waste Heat from Electrical Generating Stations," before the Institution of Electrical Engineers, said :—

It has been suggested that special facilities should be made by supply authorities to surround their power stations with industries such as paper-making and sugar-refining in order that they may sell their exhaust steam for use in industrial processes, but most of the undertakings with processes suitable for co-operation with this kind of power station are established in special districts, and their positions are not convenient. I am of the opinion that in many cases this difficulty can be overcome, on account of the ease with which energy can be transmitted in the form of electricity from one place to another, and I suggest that commercial terms should be put forward for the co-operation of steam-using industries with the supply authority so that the two may mutually benefit.

With regard to the charges to be made for exhaust steam, I suggest that with coal at 10s. per ton the proper charge would be 10d. per 1,000 lb. where the condensate is recovered by the supply authority and the distance is not more than one mile from the power station.

Under the supply of electrical energy as a by-product from an industrial works making a large use of steam, the proper charge is 0.1d. less than the fuel cost of the supply authority for a 100-per cent. load factor.

The chief point to bear in mind in working out the details of any proposal is that the benefits should be equally shared between the parties under all the varying conditions likely to obtain in actual practice. With regard to the supply of steam from an electric power station for heating purposes, it is necessary to regard electrical energy as a by-product in this case and, in order to get the most economical results, the back pressure must be kept as low as possible, a maximum of 2 lb. (gauge pressure) being aimed at as a practical possibility. In agreements for supply, a back pressure of 5 lb. per sq. in. at consumers' premises should be specified.

The friction load of a 750-kW set is often equivalent to 5,000 lb. of steam per hour, and it is a very large building that will take more than this quantity; therefore unless a 100 per cent. electrical load factor can be given to the set or sets used, there is very little profit on the arrangement. Where the heating load is small, an alternative is to "bleed" a turbine or take off a supply from the receiver between the cylinders of a compound reciprocating engine, the remainder of the steam going to the condenser in each case. It is doubtful, however, in these cases if the electrical energy is generated as cheaply than it would be by a large modern generating station using from 1 to 1½ lb. of coal per kWh, and the fact that the provision of a load factor of 100 per cent. to the plant supplying exhaust steam for heating purposes is effected at the expense of the load factor at the main power station must be taken into consideration when comparing results.

MR. E. FIANDER ETCHELLS, WHO PRESIDED AT THE ANNUAL DINNER OF THE CONCRETE INSTITUTE.

Wayleaves can be found most readily through the basement premises of buildings *en route*, the proprietors being induced in most cases to take a supply. The supply of exhaust steam for heating purposes is invariably most satisfactory to the consumer, and the demand is generally ahead of the facilities for supply.

It is said that combined stations in America have been abandoned in many cases in favour of a separate central station for the supply of steam for heating purposes only, but this does not necessarily prove that there are not many cases where a properly organized system of collaboration between existing electricity supply stations and heating consumers in congested city areas should not be profitable to both parties.

The Lighter Side of Concrete

The annual dinner of the Concrete Institute, which took place at the Savoy Hotel on Thursday last, afforded convincing proof that the toughest of subjects has its frivolities. A spirit of distinct hilarity pervaded the assemblage, and super-excellent fare, delightful music, witty speeches, enhanced the gaiety of the proceedings.

Mr. Fiander Etchells, the President, proposed "The Health of His Majesty's Ministers" in his accustomed vein of humour, and Sir Alfred Mond, responding, said that now when a specialist was required to deal with concrete matters at the Office of Works "concrete had arrived." Foreigners, he continued, appreciated British achievements far more than Englishmen themselves were inclined to do, and there was no need for depression over the general situation. Patience was required, but England was a reinforced concrete structure of the most approved type. Lord Riddell, in one of his deliciously dry speeches, proposed the toast of "The Concrete Institute." Racy allusions to the Presidential address, which he had evidently read, marked, and inwardly digested with intense appreciation, evoked much mirth, and the speaker was only allowed to sit down when he pathetically pleaded that he could think of nothing more to say. The President made suitable response, and "The Guests" was then proposed by Mr. J. E. Frank, F.R.I.B.A.

Dean Inge and Sir Alfred Robbins replied, and the proceedings ended in an adjournment to the dancing-room above.

[Mr. E. Fiander Etchells, whose portrait appears above, is a direct descendant of William Fiander, a master shipbuilder of some note, who flourished in London years before the battle of Trafalgar.]

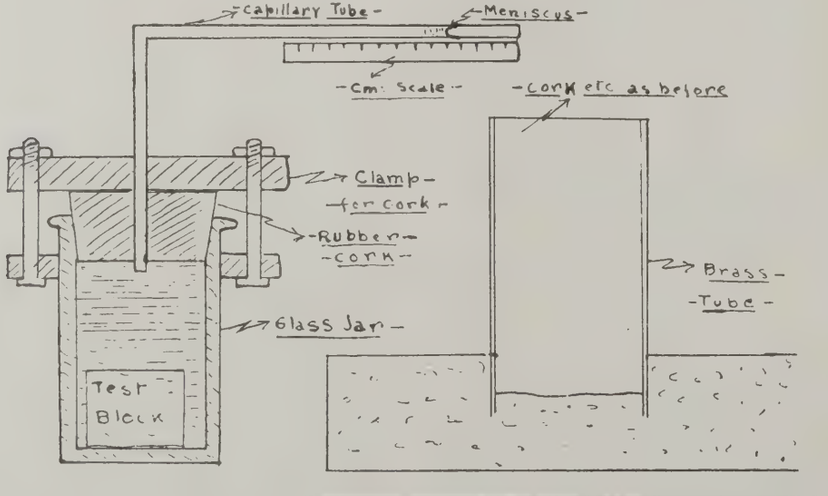
Capillary Canals in Concrete

Mr. E. B. Moullin, M.A., in reading a paper on "Capillary Canals in Concrete and the Percolation of Water through them," before the Concrete Institute, said that his experiments were first suggested by reading the report on ferro concrete issued by the Institution of Civil Engineers, which describes many experiments made in 1911 at the National Physical Laboratory on the percolation of water through concrete slabs. The experiments made at the National Physical Laboratory showed the rather surprising fact that water did not pour through concrete at a constant rate. When the slab was first subjected to pressure, the water passed through fairly freely, but in the course of some thousand hours or so the rate of flow diminished to about one-thirtieth part of the initial value. An explanation of that time reduction of percolation was that the slabs became silted up with calcium carbonate, either present initially in the water or eroded from the interior of the slab by the passage of the water. However, the same slabs were, after a rest, again subjected to a reduced water pressure, and again showed the same phenomenon of diminishing rate of flow. If silting up was the explanation, then, presumably, water should always pass at a constant rate through a slab that had once been silted up by previous exposure to water, but experiment showed that that was not the case.

The percolation and absorption experiments of the author were made on a very small scale, and the accompanying drawing shows diagramatically the apparatus used. The quantity of water absorbed was measured by the movement of the water meniscus in the horizontal portion of the capillary tube; the readings were carefully corrected for temperature changes by means of a correction curve for the apparatus obtained experimentally. The test blocks were cylinders about 6 cms. diameter and 6 cms. high. The second diagram shows the modification adopted to measure percolation through a block as well as absorption into it.

Microscope slides were made consisting of sections of cement and plaster, thin enough to transmit light through them; that was a method of attack familiar to petrologists. Examination of cement in this manner clearly showed the remains of partly dissolved cement grains: in some cases the original internal crystalline structure of these grains was visible. The intervening spaces between the grains was filled with a dense amorphous substance, which was presumably the result of the desiccation of the colloidal solution formed by the mixture of cement and water. Piercing through that amorphous substance were a large number of circular holes, which must be cross sections of spherical cavities in the block. In one slide there were fifty-five of these holes in an area of about two square cms. of cement. If a block of cement concrete was cut through and its surface ground dead flat, those cavities were easily seen, some being greater and some less than a hemisphere.

In these slides the bulk of the cement appeared to be amorphous, but the walls of the cavities were very crystalline: if those cavities were formed by excess moisture, that theory was apparently supported: in any case there was apparently a discontinuity of structure near the surface of internal cavities. Besides spherical cavities the microscope also showed a certain number of minute canals following tortuous paths through the cement. The slides showed several canals in the cement, but only one case of a duct entering a cavity; that was not surprising when the minute size of these canals was remembered. For the ducts being very small, even compared to the cavity, the chances of the section being cut at the exact spot where a duct entered the cavity were very small. Hence, although the microscope revealed the existence of these ducts, and proved that ducts do enter cavities, it could not be expected to prove that all cavities had canals leading to them, although it was highly probable that that was actually the case.



APPARATUS FOR TESTING THE PERCOLATION OF WATER THROUGH THE CAPILLARY CANALS IN CONCRETE.

Modern Methods of Brick Manufacturers

Principal A. P. Laurie, in a lecture before the Royal Scottish Society of Arts, Edinburgh, on "Modern Methods of Brick Manufacture," said there had been little progress made in methods of building within the last two thousand years. To-day much more would have been done in this direction if it had not been for the well-meant schemes for subsidizing building due to the Government. He knew that at least one machine had been invented which was able to lay all the bricks mechanically for building an ordinary house at the rate of some 2,000 bricks an hour.

Principal Laurie said it was no longer economical to make clay bricks unless the brick itself contained most of the fuel required for its burning. The result had been a stimulus of the manufacture for the first time in this country of the type of brick known as the sand-lime, which was invented by William Michaelus in 188

The principle of the sand-lime brick was to take some form of silica or compound containing silica, mix it with a certain amount of slaked lime—about 8 per cent.—subject it to a very heavy pressure of about 200 tons on the surface of the brick, and mature by placing in a steam oven or high-pressure steam chamber for some six hours so as to get a combination between the lime and the silica. Such methods of manufacture were now being rapidly adopted in this country. Brickworks were now established to manufacture bricks by the process from the waste shale heaps. Principal Laurie stated that he had no doubt that they were just on the open of an era of invention in connection with building by which the most conservative of all our trades would probably be transformed.

E. Pollard & Co.'s Staff Dinner

The twenty-seventh annual staff dinner of Messrs. E. Pollard & Company, coupled with the third anniversary of the Sunce Company, has been held at the Ga Central Hotel. Mr. E. Pollard occupied the chair, and was supported by Mr. H. Barnes (director and general manager) and his co-directors Messrs. H. E. Pollard, M. J. Larkin, A. C. Caldicott, R. Thomson, E. W. Elsbury, and A. A. B. Walford. The staff and guests numbered Among the guests were Mr. P. H. Mortimer, assistant general manager of the London County Westminster and Par Bank, Messrs. R. W. Brett and E. Yo man, branch managers of the L.C.W. Parr's Bank, and J. Latham, M. Lath Sydney Nicholls, and Samuel Nich The chairman proposed, and Mr. H. Barnes seconded, the toast of the st Mr. R. W. Lone replied on behalf of the staff. Mr. M. J. Larkin toasted the guests, and this was acknowledged by Mr. E. L. Latham. Miss W. Bat responded to the toast of the ladies, pro by Mr. A. A. B. Walford. Mr. P. Mortimer proposed the health of the chairman, and the chairman concluded the speeches by thanking Mr. Mortim The remainder of a very enjoyable eve ing was spent in dancing and cards.

Photo : J. Douglas Ritchie.

PAISLEY WAR MEMORIAL COMPETITION : FIRST PREMIATED DESIGN
SIR ROBERT LORIMER, A.R.A., ARCHITECT. MRS. G. A. MEREDITH WILLIAMS, SCULPTOR.
(*See page* 231.)

The Week's News

Memorial Hall for Chorley Wood.

A new war memorial hall is to be erected at Chorley Wood at a cost of £3,892.

Timber Exchange, Olomouc.

It is reported that a timber exchange has been established at Olomouc.

Maternity Home for Ilford.

Ilford Council proposes to erect a new maternity home in a thoroughfare known as Hatch Lane.

Hornsey Dust Destructor Improvements.

Hornsey is asking sanction to borrow £15,820 for dust destructor reconstruction and extension of buildings.

New Baths for Paddington.

When a site has been chosen, Paddington will ask for a loan of £53,000 to build new baths.

Architect's Change of Address.

Mr. Geoffrey T. Mullins, A.R.I.B.A., has moved to 6 Old Queen Street, Westminster, S.W.1. Telephone, Victoria 8354.

The New County Hall.

The London County Council expects to take full possession of New County Hall by the end of June.

Woolwich Housing.

A tender of £63,700 has been accepted for the erection of ninety-eight houses on Woolwich council's estate at Eltham.

Memorial to Lord Rhondda.

A memorial to Lord Rhondda, designed by Sir Edwin Lutyens, has been erected at Llanwern, Monmouthshire.

Society of Architects' Annual Dinner.

The annual dinner of the Society of Architects, which had been fixed for February 22, 1922, has been postponed *sine die*.

New Roads.

It was reported at a meeting of the L.C.C. that work on the new London to Folkestone road will shortly be commenced.

New Electricity Station for St. Pancras

A Methodist chapel in Grafton Road, Kentish Town, is being converted by the St. Pancras Borough Council into an electricity station.

Arnold Bennett's House for Sale.

Comarques, the fine old Georgian house at Thorpe-le-Soken, for many years the residence of Mr. Arnold Bennett, has been placed on the market.

New Club for Sutton-in-Ashfield.

The Duke of Portland has given 200 yards of land to the Sutton-in-Ashfield British Legion upon which to build a club.

The White City.

Negotiations are practically completed for the re-opening of the White City at Shepherd's Bush in 1923. As in former years, the exhibition will be international in character. Plans have been completed for many new features on the amusement side.

Chantrey Bequest Purchase.

A marble statue, "Psyche," by Alfred Turner, has been purchased by the Royal Academy under the terms of the Chantrey Bequest.

Houses at Golcar.

Sanction has been received by the Golcar District Council to erect sixteen additional houses at Leymoor, and tenders for these, at about £450 per house, have been accepted.

Scheme for Railway Electrification.

Sir Philip Nash has been appointed by the Ministry of Transport to preside over a small committee which will consider the possibility of a standard scheme for the electrification of certain sections of the Southern group of railways.

H.M. Factory, Gretna.

The Disposal and Liquidation Commission has decided that if no acceptable offer is received for His Majesty's factory, Gretna, as a whole, before March 31 next, the property after that date will be partially dismantled and the remainder offered for sale in separate lots.

The Royal Society of Arts.

The Royal Society of Arts will be able to continue to occupy its famous house in the Adelphi, which Robert Adam designed for the Society in 1775. Altogether £45,000 has been received or promised towards the purchase and renovation of the old house.

New Olympia for London.

Negotiations have just been concluded for the sale of a considerable building site in the centre of London. It has been acquired by a syndicate, and it is proposed to erect on the site an exhibition building similar to Olympia, with the addition of a music hall or cinema.

New Black Country Road.

The Ministry of Transport has undertaken to provide half the cost of a new highway between Birmingham and Wolverhampton. The proposed road will be 9½ miles long and 150 ft. wide. The cost is estimated at £400,000.

London Relief Works.

Owing to the exhaustion of the State funds placed at the disposal of the Unemployment Grants Committee for maintenance works, the London County Council have been compelled to curtail their programme of relief works in parks and open spaces.

The Sydney Harbour Bridge.

The Agent-General for New South Wales states that his Government has not yet received any tender for the construction of the superstructure and substructure of the huge cantilever bridge across Sydney Harbour. The latest date for receiving tenders at the Public Works Department, Sydney, is October 31 next.

A Bourdelle Exhibition.

Antoine Bourdelle, who is regarded by many people as the greatest French sculptor since the death of Rodin, has now organized an exhibition of his works in Paris. There are many busts and bas-reliefs which admirably show the strong architectural style, the massive modelling, of the sculptor.

Mediæval English Tiles.

A relic of Early English arts and cr will be offered at Sotheby's next mo in the form of a series of eight thirte or fourteenth century red clay tiles figures. The illustrations are of sc from the Apocryphal Gospels, and were probably made by the Cister monks.

Housing and Town Planning Confere

During this year from fifty to s conferences are to be held by the Nati Housing and Town Planning Counc various parts of the country. The cer at which the conferences will be have been specially chosen with a that, except in rural areas, the dist to be travelled by delegates shall exceed twenty-five miles.

Building Guild to Employ Busine Methods.

The National Building Guild formed itself into a limited liability pany, with articles of association. T will be no division of profits, and affairs will be governed principally national conference. Business met are to be employed to get work, a dozen canvassers will be engaged fo whole of the country.

A New L.G.O.C. Garage.

The new Central Overhauling Wor the London General Omnibus Com at Chiswick, which are claimed to b most modern in lay-out and progre in system in the world, have now opened. They introduce a syste "mass production" in dismantling re-assembling which reduces the p for the complete overhaul of an om from sixteen to four days, or, in cas extreme urgency, to forty-eight hou

New House for Mr. Lloyd Georg

Mr. Philip Tilden, of 3 Pelham cent, S.W.7, asks all those who ha kindly written to him with regard t building of the above house, of whi is the architect, to take this intim that the contract is already signed, that those people who are to do the have already been engaged. He is, ever, keeping all the information him, and hopes to have use for mu it in connection with other buil The plans and elevations will be public in due course.

The Knickerbocker Cinema.

The Knickerbocker Cinema, the of which collapsed with such heavy of life, was one of the largest of the cinemas recently opened in Washin Its seating capacity was 2,000, butt believed that not more than 500 p were present when, shortly after 9 o there was a terrific crash and a la shower of plaster and dust. The instant the huge skylight and vent fell in, and then the whole roof coll upon the spectators. The balcon which were over 100 people, gave under the weight of the débris, an forward into the orchestra stalls, bri with it many steel girders and one outer walls of the theatre.

(*Continued on page* xxi.)

Trujillo's Statue of "Liberty."

Members of the Society of Architects are asked not to take part in the above competition without first ascertaining from the Secretary of the Society that the conditions have been approved by the Council.

A Useful Diary.

One of the handiest diaries we have seen this year comes from Messrs. Simplex Conduits, Ltd., of Garrison Lane, Birmingham. Strong and tastefully bound in leather, it is the ideal diary for the architect or engineer. All the writing space is composed of squared paper, which is a great advantage when making rapid sketches in the office or on the job. Each left-hand page is devoted to one week, the right-hand and many other pages being left for notes. The diary also contains much valuable general information, together with useful illustrated particulars of Simplex specialities.

Cambridge School of Architecture.

A number of architects who are old Cambridge men have formed a club with a view to helping, wherever possible, the work of the Cambridge School of Architecture. As a first step they have agreed to double the donation of £50 given this year by the R.I.B.A. to the funds of the School. They propose in future to meet once a year, either in Cambridge or London, to establish relations with the staff of the school, and to keep in touch with its work generally. Mr. Maurice E. Webb, F.R.I.B.A., has been elected chairman of the club, and Mr. J. Alan Slater, A.R.I.B.A., hon. secretary and treasurer.

The New Surveyor to Christ's Hospital.

Mr. Sydney Tatchell, F.R.I.B.A., has been appointed by the Council of Almoners the surveyor to Christ's Hospital on the retirement of Sir Alexander Scanning, who has acted in this capacity for upwards of twenty years. Mr. Tatchell was a pupil of the late Thomas H. Watson, F.R.I.B.A. (Soane Medallist). He studied modelling and design under F. W. Pomeroy, R.A., and at the Architectural Association, and began practice in Westminster in 1905. He is surveyor to the Worshipful Company of Ironmongers, and architect to the Public Health Committee of the Surrey County Council.

War Memorial at Loughborough.

The foundation stone of the Loughborough war memorial campanile has been laid in Queen's Park. Mr. Walter Tapper, the architect, has prepared designs for a campanile to contain a carillon of bells. The cost of the tower will be £5,000. It will be 24 ft. square at the base, rising to a height of 150 ft. The base will be built of Portland stone for some 17 ft., on which will rise brickwork to a height of 84 ft. Above this the upper and turret are to be constructed of timber encased with copper sheeting. The facing bricks will be of local make, and the whole of the work will be carried out by Messrs. William Moss and Son, of Loughborough.

Building Surveyors' and Inspectors' Association.

At a special general meeting held at Manchester the Building Surveyors' and Inspectors' Association unanimously agreed "That the Association adopt the R.I.B.A. Examination for building surveyors to local authorities for future members, to come into operation at a date to be subsequently determined, and subject to the acceptance by the R.I.B.A., of certain terms now under consideration." The meeting also adopted the proposed scheme for co-operation with the National Association of Local Government Officers. It was decided to refer the question of statutory recognition to a sub-committee for a more detailed scheme, with a view to its going forward to the N.A.L.G.O. for further action. The question of service conditions was reported to be under consideration by a special sub-committee.

Industrial Council for the Building Industry.

The quarterly meeting of the Industrial Council for the Building Industry will be held at Montague House, Whitehall, London, S.W.1, on Friday, February 10, at 10.30 a.m. Consideration will be given to the reports on the Safety and Welfare Committee with regard to (*a*) silicosis among stonemasons; (*b*) draft regulations for (1) building operatives and (2) woodworking machinery. Reports, if any, will be received from the following Council Committees: (*a*) Administrative; (*b*) Management and Costs; (*c*) Education. Members are not being summoned for Thursday afternoon as was originally intended, as it is expected that one full day's sitting will enable the Council to deal with the business just now requiring attention.

Prices of Materials and Labour

The prices of building materials being no longer subject to violent fluctuations, and building trade wages having been stabilized for some time to come, the Editors of THE ARCHITECTS' JOURNAL take the view that there is no longer any need to publish these tables week by week. In future, therefore, they will appear in the first issue of each month. Readers wishing to consult current prices should refer to last week's issue, dated February 1.

Lord Forrest Memorial

A meeting of the committee formed to arrange a memorial to the late Lord Forrest, formerly Prime Minister of Western Australia and later Minister of Defence and Finance Minister respectively in the Australian Commonwealth Government, has been held at Savoy House, Strand. Sir J. D. Connolly, Agent-General for Western Australia, announced that in accordance with the wish of the committee, who desired that a memorial should be placed in the Chapel of the Order of St. Michael and St. George in St. Paul's Cathedral, of which Order Lord Forrest was a member, Lord Denman had been in consultation with the Cathedral authorities, and learned that the Order would greatly appreciate the gift of a throne for the Prelate of the Order and as a memorial of Lord Forrest. The scheme had the hearty approval of both the Dean and Chapter and the officers of the Order, and Lord Denman learned that the former were prepared to supply some old oak carvings from another part of the Cathedral for use in the construction of the throne. The design would be executed under the direction of Mr. Mervyn Macartney, the Cathedral architect. The proposal was unanimously approved by the committee, and a sub-committee was appointed to carry out the necessary arrangements.

London County Westminster and Parr's Bank

The annual ordinary general meeting of the shareholders of the London County Westminster and Parr's Bank has been held at the Head Office, 41 Lothbury, E.C. Mr. Walter Leaf (the chairman) presided.

The chairman, after reminding the shareholders that he spoke twelve months ago on 1920 as a year of disillusion, said that 1921 had been a year of crises, of acute contests, of heavy losses in many directions, of hope deferred. But he thought they might fairly claim for it that it had been a year of courage. Facts had been boldly faced, formulæ had been cast aside, principles had been fought out to the end, and in many directions they had good hope that peace was, if not actually won, at least well in sight. Peace was what the world needed more than any other boon. Referring to the acute general depression with its accompanying curse of unemployment, he said that it was in the export trade of the country that there was most need and at the moment least prospect of immediate recovery. Until we regained our export trade the outlook must remain far from cheering.

Having made a running commentary on the banking year, he analysed the Bank's balance sheet, observing that the aggregate deposits in the banks, instead of decreasing, as one might have expected, had actually risen; in their own case the amount of £317,000,000 shown at the end of the year was a record, exceeding by £12,000,000 the amount in the last annual balances heet. This was a measure of the real resources of the country. It largely consisted of money placed on deposit awaiting investment, and could not be taken as a sign of inflation, for there had been no increase in the total borrowing of the country, and the currency notes had, in fact, been materially reduced. He then alluded to their affiliated banks, the Ulster Bank in particular, and went on to speak of the general financial and trade prospects for the current year, detailing recent reports from the great industrial centres. The past year, he said, had been a year of courage in facing losses, and the coming year was likely to be a year of courage in recovering lost ground. Recovery would come, but it would come slowly.

The great need of the country was the recovery of our overseas trade—imports as well as exports, for we could not have one without the other. It was to Central Europe and notably to Germany that we must look for recovery.

Finally, he deprecated such legislation as the Safeguarding of Industries Act, and put in a strong plea for a real peace, of which international commerce was at once the sign and the stimulus. This could only be attained by free intercourse, untrammelled by any artificial restrictions.

The report was unanimously adopted, and other formal business transacted.

A cordial vote of thanks to the chairman closed the proceedings.

The "Bardsley" Reversible Door Check

We have received from Messrs. Nettlefold and Sons, Ltd., of 54 High Holborn, W.C., some interesting particulars of the "Bardsley" reversible door check and spring, which is the outcome of over thirty years' experience and experiment in the manufacture of door-closing mechanism. These door checks are now manufactured by the most improved methods for the production of repetition work, thereby insuring absolute interchangeability. Whilst being perfectly reversible (it can be applied to either a right-hand or a left-hand door without changing anything whatever), it also possesses the soft-cushioning, silent-closing feature. This is accomplished by an arrangement whereby the crank in the liquid cylinder is automatically adjusted to the proper angle to produce the maximum checking action at the closing point of the door. Thus, should a check be placed upon a right-hand door, and the crank happens to be standing at the position for a left-hand door, the crank will immediately adjust itself to the proper position the first time the door is allowed to close, and the piston meets the resistance of the liquid in the lower cylinder. Another important feature is the provision of a device for preventing capillary attraction along the spindle, thus removing all possibility of leakage of the checking liquid from the lower cylinder into the spring chamber. The packing or gland washer is placed high up in the spring chamber, well above the side thrust. A further advantage is the low position of the vent port, which ensures the sucking of the liquid (not air) by the piston on its backward movement and the preservation of the checking power until more than half the liquid has wasted away. More liquid can easily be added when required, as a screw hole has been provided in the centre of end plug for that purpose. There is also a device by means of which the checking action is suddenly released as the door nears the jamb, and causes the door to snap-shut, but without any annoying slam. This feature (which may be used or not) is brought into play by extending the adjustable arm until the main arm stands nearly at a right angle with the door. The arms are provided with universal pin joints to prevent binding, which allows this door check to be used on doors having rising butts. Messrs. Nettlefold and Sons, Ltd., also carry large stocks of builders' ironmongery and brass foundery of all kinds, including a comprehensive selection of locks and padlocks. The firm also supply nails, tacks, roofing bolts and tools of all kinds.

Coming Events

Thursday, February 9.

College of Estate Management.—"Town Planning." By Professor S. D. Adshead. 5.30 p.m.

Friday, February 10.

Royal Technical College, Architectural Craftsmen's Society, Glasgow.—"Central Heating of City Housing." By Mr. Thomas Whyte, F.F.S., P.A.S.I.

Manchester University.—Public Lecture. "The Work of the Mediæval Builders." By Professor Baldwin Brown, M.A.

Industrial Council for the Building Industry.—Quarterly meeting of the Council at Montague House, Whitehall, S.W.1. 10.30 a.m.

Wednesday, February 15.

Industrial League and Council, Caxton House.—"Industry and Its Relation to Finance." By Sir George Paish.

Latest List of New Inventions

Latest Patent Applications.

1598.—Barrett Co.—Manufacture material for roofing, wall co... ings, &c. January 18.

1670.—Folland, H. P.—Constructi... metal work. January 19.

1344.—McKeown, R. R.—Plastic m... terial for builders. January ...

Specifications Published.

173560.—Mairs, W.—Device for drill... holes in exposed slates fixed ... roof so as not to injure s... directly underneath.

173577.—Norman, S. H. — Means ... erecting or constructing c... crete or ferro-concrete str... tures and the like.

157430.—Höfler, R., and Renyi, S... Building blocks or slabs.

Abstract Published.

172164.—Bricks.—Baines, J. S., 8 Coro... tion Road, Great Crosby, ... Joyce, T. H. Glenart, Coro... tion Road, Crosby, Liverpoo... Concrete blocks formed of ... parallel members spaced ap... and connected by transv... union-pieces of small sectio... area have the union-pieces ... inforced by bars, wires, ... and the ends of the meml... grooved to receive grout... when in position. For corn... a square end is provided in ... block with an aperture the... for grouting.

The above particulars are specially prepared ... Messrs. Rayner & Co., Registered Patent Agents, 5 Chancery Lane, London, from whom readers of ... Journal may obtain all information free relatin... patents, trade-marks, and designs. Messrs. Rayner & ... will obtain printed copies of the published specifica... and forward on post free for the official price of 1/- ...

By Appointment.
Architectural Decorators
— to —
H.M. King George V.

H. H. MARTYN & C...
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STAINED GLASS WINDOW...
And 5 Grafton Street, Bond Street, LONDON, W.1.
CHELTENHAM.

ARCHITECTURAL REFERENCE LIBRARY.

The attention of Architects, and of those interested in Architecture, is called to the facilities afforded by the specially appointed Reading Room at 27–29, Tothill Street, Westminster.

This Room has been set apart in order that the numerous Works in the Library may be referred to in quietude and ease.

Overseas Members of the Profession, and also Architectural Students, are cordially invited to make the fullest use of the Library.

...esday, February 15, 1922. Vol. LV. No. 1415

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

CHARING CROSS IN THE EARLY NINETEENTH CENTURY.
From a Drawing by T. S. Boys.

27-29 Tothill Street, Westminster, S.W.1.

Current Architecture. 145.—Church of the Sacred Heart and St. Catherine, Droitwich.

Peacock and Bewlay, Architects.

Simplicity is the keynote to the interior of this church. In it Messrs. Peacock and Bewlay have endeavoured to catch the spirit of the early Christian basilicas in Rome and Ravenna, and this very simple apse, with the hanging lamp and rich altar as a foçal point, makes an effective piece of design. The floor in the foreground is of quarries, but the sanctuary is paved with marble. The mosaic decoration to the sanctuary arches has been designed by Mr. Gabriel Pippet, of Oxford.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

Wednesday, February 15, 1922 Volume LV. No. 1415

Registration: A Reactionary Resolution

IF it had been carried in accordance with the R.I.B.A. by-laws relating to such matters, a snap-vote taken on a skilfully engineered reactionary resolution would have wrecked the Unification movement. Fortunately the resolution, although the reactionaries turned up full strength to vote for it, did not secure the requisite two-thirds majority, and it therefore failed.

So pronounced a wrecking resolution deserved no better fate; but the incident should be a warning to the apathetic that the forces of reaction are active and alert if not very powerful. Unless, at the approaching election for council and officers, the votes declare emphatically against the wreckers, Unification and Registration may become no more substantial than an idle dream, and the work expended on them will be labour in vain.

It is not a completely complimentary thing to say; but this sinister snap-vote incident has brought into prominence a certain inveterate laxity of the R.I.B.A. Council. It would seem that the Council, in its primitive innocence and simplicity, has not paid sufficient attention to the gentle art of electioneering. Gerrymandering is as foreign to it, and no doubt as abhorrent to it, as jerry-building. There is yet time, however, to repair their defective education in such branches of the tree of the knowledge of good and evil. Rigid economy should not be found inconsistent with their resolving to place before architects a terse and cogent statement of the case for Unification and Registration. Such a document seems overdue.

The *per contra* case has been put with more skill than candour in a pamphlet issued and scattered broadcast by a League that seems much less anxious for progress than to keep things as they are, bad as they are.

Such clever electioneering could not fail to produce visible effects, and the unexpectedly strong support (numerically) accorded the obscurantist wrecking resolution brought forward last week at a special general meeting of the Institute is one of them; for that resolution (which was nearly, but not quite, carried) faithfully reflects the intentions advanced in the pamphlet produced and circulated at great expense by the League.

It is time to say a faithful word to these Covenanting Leaguers for the good of their souls. They think to do the Institute good. They are doing it harm. They are making it appear to be a house divided against itself. They show themselves disposed to insist on every jot and tittle of the law at present regulating admission to the Institute. Members are encouraged to stand out for their rights and rites as if the Institute were a lodge of the Ancient Order of Pharisees.

It is a cleverly written pamphlet, and has undoubtedly made many converts, or perverts, to its narrow anti-unification views. Vigorous steps should be taken to counteract its baleful influence. Not in so many words, but in its effect if not in its aims, this pamphlet is destructive of the larger unity. It lays the axe at the root of the tree, for it stubbornly refuses to entertain any proposal to modify the conditions of entrance to the R.I.B.A.; would intercept alike the candidate and the movement at the very threshold.

At the same time the pamphlet professes not to oppose Registration. It dissembles its love for it by kicking it downstairs; for since, on a broad and reasonable survey of the situation, it certainly appears that solidarity of the Profession cannot be achieved without some slight expansion of the entrance door, these stern and astute Covenanters of the League saw very clearly that they might spare themselves the trouble of opposing Registration *per se*. Registration and Unification stand or fall together, and to jettison the one is to throw the other overboard with it.

Besides, the pamphlet of this slightly solemn but decidedly farcical League and Covenant had as an appendix counsel's opinion to the effect that Registration is useless or impossible. Nothing doing. It would therefore seem that the Leaguers have not the slightest objection to Registration, but prefer it dead.

By the resolution they proposed and nearly carried at last week's special general meeting, that view became luminously clear. Of course, the Leaguers may claim that their wrecking resolution did not deal specifically with Registration at all. It had no need to. One does not care to flog dead horses. And the instant effect of the wrecking resolution would be to render Registration "very, very dead."

That inoffensive resolution would be merely the mild expression of a pious opinion; would merely make Unification impossible, nullify completely the long and arduous labours of the Unification Committee, stultify completely the forward policy of the R.I.B.A., and bring the Institute perilously near to a gross breach of faith with the other parties to the scheme for Unification and Registration.

That is all; so now let us get on with the Registration Bill! Only one of the Siamese Twins would have been slain; the other might chance to survive, and even to flourish the more vigorously for the bereavement of one that clung closer than a brother; or it might not; for, as Major Barnes, M.P., reminded us in the pages of this JOURNAL last July, "A profession divided against itself cannot succeed in the House of Commons."

Either the pamphleteers think that it can or they are reckless of the consequences of their revolt, for here we have a powerful professional clique, a portentously solemn League and Covenant, as it were, deliberately rejecting the considered advice of a special joint committee on Unification. Such an intransigent attitude can only be regarded as mischievous to the cause of unity. It sets up sharp division where close union is essential if the great project is to succeed, and this sinister move can only be successfully countered by taking steps to secure an overwhelming preponderance of votes for progress at the next election of Council and officers; this, not to score off the Leaguers, who are doubtless as solicitous as we are for the welfare of the Institute, of the Art, and of the Profession, and to whom

therefore we could wish no manner of chagrin, none of the bitterness that comes of a defeat at the polls; but a strong vote adverse to the leaders seems almost necessary to convince Parliament that the Profession is not divided against itself on the question of union.

To avoid this paradoxical position, if not to avoid defeat at the elections—a catastrophe that we should deplore—the leaguers should make haste to come to terms with respect to the question of admission. To withdraw from their untenable and unpopular position would be a graceful thing to do, and would put beyond dispute the willingness of the leaguers to set aside minor and sectional issues, and to co-operate fraternally in the cause of unity, in which Registration is involved. Taking it at its face value, and denuding it of Adullamite, Diehard, or Covenanting prejudices, the matter is very simple, and could be eas adjusted to the satisfaction of all fair-minded architec who would really like to see their Profession united, hon geneous, respected. It must be realized very clearly th to be disunited is to be feeble; that the R.I.B.A. c afford a few harmless concessions to expediency, and th until it has the courage and the magnanimity to make the it can never be credited by the State, by the public, or the eyes of the law, with the authority and the influen to which, on its merits, and on its record of services to A and to the community, it is entitled to aspire, but which will never acquire in anything like due measure until can suppress all minor differences and show itself unite and resolute with the courage and strength that come unity.

Notes and Comments

A Coloured Façade Competition

The "Brighter London" cuckoo-call is not for avoidance. It is ubiquitous, and takes Protean shapes. Rumour says that it has even echoed down the corridors of No. 9 Conduit Street. The reference was not to the Leaguers there, for their tendency is to obfuscation rather than brightness. Some munificent mind in touch with the Institute has conceived a colour-scheme. That is to say, an anonymous donor has offered prizes to be earned by those who produce the best designs of façades into which coloured materials are introduced. They are to be materials of whose colouring it may be said, in Shakespearian phrase, "'Tis in grain, sir." They will not be applied with a brush, but will be integral, and derived either from the native hue of the earth-born brick or tile, or from some cunning chemical compound fused and stabilized by intense heat. This competition for the colour decoration of house fronts is going to be very exciting. Friends and foes alike of coloured fronts will eagerly await the results, for they want to see, respectively, how resplendent and how hideous coloured materials would appear in our town buildings. As far as London is concerned the extent and duration of the "brightening" would depend entirely upon the extent and duration of the smoke nuisance. But, in any case, we cordially welcome the competition, of which full particulars are given in another part of the present issue.

Mr. Thomas Hastings, Royal Gold Medallist

The nomination of Mr. Thomas Hastings as the Royal Gold Medallist of the current year will increase the pleasure of two continents. Mr. Hastings is an American of the Americans, but his work is almost as well known, and is quite as much esteemed, by French and by British architects as it is by his fellow-countrymen. He is the spiritual descendant in a direct line from the late Charles Follen McKim, in whose office he served, absorbing its best traditions, for two years and a half, having been previously a distinguished pupil of Jules André's at the Paris Beaux-Arts. If he had done no other work in architecture, he would deserve the medal for his extraordinary services to architectural education. He has a passion for scholarship in his art, and has probably done more than any other living American to promote it, which is saying a great deal. He is one of the founders of the American Society of Beaux-Arts Architects, was president of the Architectural League of New York, and is an active member of the National Academy of design, of the American Academy of Arts and Letters, and of several other societies of similar character. Needless to say, scholarship is unfailing in the many stately buildings with which he has been associated as a member of the firm of Carrère and Hastings. The firm's works embrace every type of building—public and educational, churches, office buildings, country estates, city residences—and with Mr. John M. Carrère, Mr. Hastings designed t architectural portion of the Lafayette monument erecti in the Place du Carrousel, Paris, and was thereafter mad Chevalier of the Legion of Honour. The gold medal w come to him in the sixty-second year of his age.

Stained-Glass Artificers

It is stated that there is a dearth of stained-glass worke There is, it appears, a sufficiency of designers, but skill mechanics are few, and very few learners are coming in the trade. London County Council have found it exp dient to close their classes for stained glass at Hamm smith, but are continuing those at the Central School Arts and Crafts in Southampton Row. This dearth workmen is in the main a consequence of the cessation building and more especially the opposition to "luxu trades," and the over-taxation of the "new poor" had one time so seriously menaced the production of stain glass for the adornment of private houses that youth w scared away from a trade that was subject to so mu vicissitude. It is not surprising, therefore, that the en mous demand for stained-glass memorial windows fou the manufacturers unprepared to cope with it. In so instances they are, it is said, a year behind with their ord for war memorials. It would seem that war memori take this form somewhat too frequently. Church interi are suffering overmuch from the popularity of "dim r gious light." That, however, is a separate question. It more to the purpose to ask whether the new Glass-painte Society will not take in hand this matter of the dearth workmen, conferring, perhaps, with the London Cou Council, the Society of Arts, and other corporations a and willing to promote art-craftsmanship, on the ways a means of recruiting the stained-glass artificers otherw than by importing them from abroad. Stained glass i when used with moderation and good taste, a beauti adornment for buildings other than ecclesiastical, and architect would be more likely to specify it if he could sure that it was not imported, but a native product.

Norfolk House, St. James's Square

It is stated that Norfolk House, the stately if hea looking mansion that Matthew Brettingham designed 1742 for the then Duke of Norfolk, is to be let furnished a trifling consideration of five thousand a year or so. 1738 George the Third was born in the house which s stands at the back of it. Situated at the south-east corne St. James's Square, it is a conspicuous example of old to mansion style of architecture, and one hopes that a wealt tenant may soon be found, lest a worse thing might hap to it. It was in the reign of George the Third that a Du of Norfolk distinguished himself by the daring advent of being the first member of the House of Lords to disc pigtail and hair-powder.

Building Exhibition Stand and Lay-out Competitions

EXCELLENT as it is as a practical means of bringing to the notice of architects, builders, and the general public every variety of building material and fitment, the Building Exhibition has never achieved the character of an architectural conception. This has long been generally recognized—by the promoters of the exhibition as much as by architects and some of the exhibitors themselves.

The explanation of its deficiencies in this respect is to be found mainly in the fact that the Englishman is a confirmed individualist, who dislikes intensely any attempt to make him conform to a general scheme. He mostly insists that his stand shall be of any style, shape, height, or colour that he cares to make it, and the results are frequently distressing.

Stands of individual charm and distinction, mostly designed by architects, are always to be found at Olympia; but the general effect of the exhibition is unsatisfactory, because there is no underlying scheme for the whole, and no generally ruling restriction as to the height of structures.

By an "underlying scheme" we mean a plan with a dominant geometry in it—a plan specially devised not only to inform the eye with its focal points and vistas, but also to overcome the difficulties of "free circulation"—to make the business of getting about the stands at once easy and pleasant.

We also include in the term such things as the general decoration of the hall and the design of features ancillary to the exhibition stands, such as signs indicating rows and numbers.

On the Continent and in the United States these things are determined by committees of taste mainly composed of architects, with the result that public exhibitions, in addition to their own inherent interest, always have a definite attraction as organic architectural conceptions.

Is such a thing possible in connection with the Building Trades Exhibition at Olympia? We believe it is, and therefore invite our readers to send in suggestions for its improvement both in detail—that is, as to individual stands—and in general lay-out.

The competitions which we announce below are promoted on our own initiative, and with the entirely disinterested object of making the exhibition more attractive architecturally. We are confident that any practical suggestions that may take shape as a result of these competitions will be given due consideration by Messrs. Montgomery, the promoters, and by the large numbers of manufacturers and others who support the exhibition.

We have pleasure therefore in offering the prizes set out below for the designs we select as being the best under the two descriptions following :—

A.—A Design for an Exhibition Stand.

B.—A Design for the Architectural Lay-out and Treatment of a Building Exhibition held in Olympia.

Fifteen prizes will be awarded as follows :—

A.—For the Stand : first, £10; second, £5; third, £2; and five consolation prizes of £1 each.

B.—For the Architectural Lay-out and Treatment a prize of £10, one of £5, and five consolation prizes of £1 each.

Competition A

With regard to Competition A it is to be assumed by competitors that the stand will occupy a floor space of 20 ft. by 20 ft.

The architectural character of the stand itself, and the materials to be employed in its construction, are left to the discretion of competitors themselves, as it is felt that hard and fast conditions are undesirable. Beyond the restriction of site area there is nothing to hinder the free development of ideas, though it will naturally be understood that extravagance in height and in architectural character are things to be avoided.

It may be assumed that the stand is an isolated structure having gangways on all four sides.

Exhibition stands are necessarily of many varieties, and competitors are at liberty to select any type they like. Designs should be specially prepared, however, with a view to interpretation in some specific material—brick, stone, marble, concrete, tile, plaster, natural wood, wood painted or enamelled, and so forth. Appropriateness to purpose and simplicity of design are the factors that will be primarily taken into account in making the awards.

Designs for the stand, made on a single sheet of either cartridge or tracing paper, should include plan, sections, elevations, and perspective, to $\frac{1}{4}$ in. scale, drawn preferably in pen-and-ink, though wash rendering will be admissible.

Competition B

The plan reproduced in this issue is of the last exhibition, and is given merely as an indication of the area to be treated. The existing arrangement of gangways need not necessarily be adhered to, as the essential object of Competition B is to produce an ideal architectural lay-out.

Designs for the lay-out and general architectural treatment should be shown in plan, $\frac{1}{25}$ in. scale, and by a bird's-eye view (with elevations and sections in addition, if considered necessary).

The area of Olympia is approximately 150,000 square feet. The interior depth of the building from the front entrance to the back wall of the annexe is 670 ft., the depth of the main hall (excluding the annexe) being 439 ft. The internal width from wall to wall is 250 ft. The height of the building at the crown of the roof is 100 ft., the main ribs having a clear span of 170 ft. The average width of gangways between stands is roughly 8 ft.

Competitors should remember that the hall has galleries on all four sides, that over the entrance being 24 ft. deep, and the others 39 ft. The pillars supporting the galleries are 15 ft. 9 in. high and 34 ft. c. to c., being joined together by arched girders, the soffits of which, at the highest point, are 17 ft. 4 in. from floor level.

Designs will be judged by a well-known architect, whose name will be announced in a following issue. His decision is to be accepted as final.

The proprietors reserve the right to illustrate in THE ARCHITECTS' JOURNAL, or in any other publication of Technical Journals, Ltd., any designs submitted, whether awarded a prize or not.

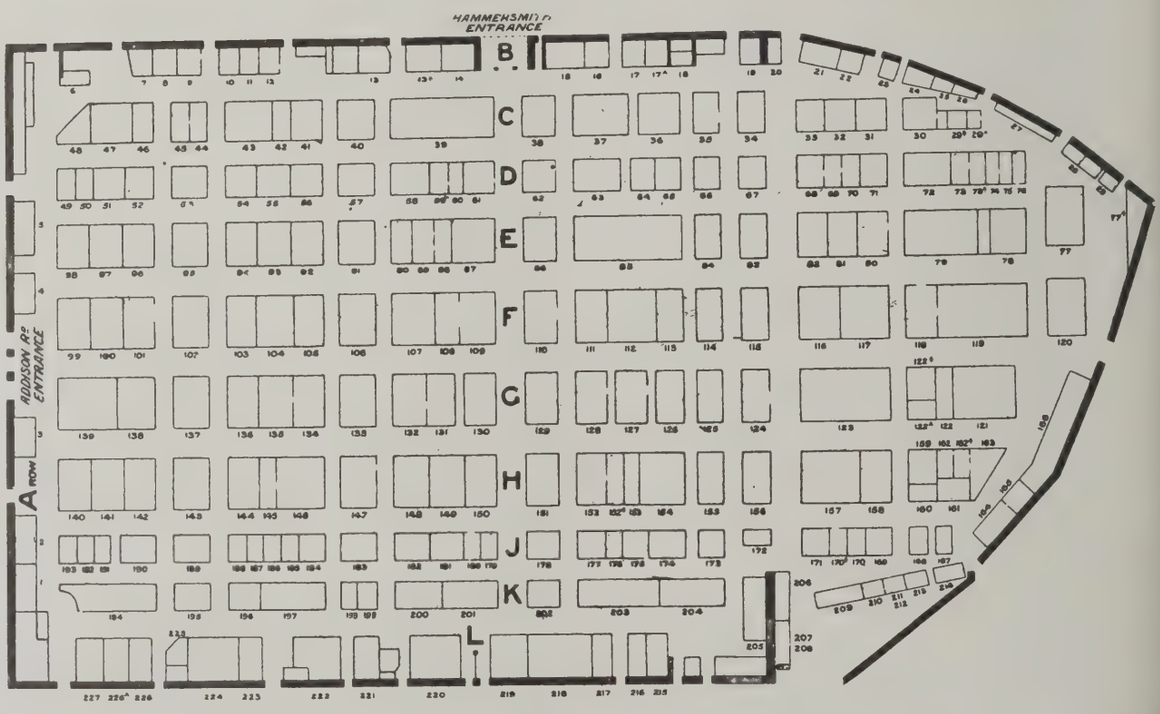
In the likely event of any firm desiring to carry out a design on some future occasion the rights of competitors remain intact, and designs will be published as copyrighted with a note to that effect.

Readers may enter for both competitions, but they must not submit more than one design in each.

The name and address of competitors should be sent under sealed envelope addressed to the Editors, and designs should be submitted under a *nom de plume*.

Drawings marked "Exhibition Competition" should be packed flat or sent in a cardboard roll, addressed to the Editors, THE ARCHITECTS' JOURNAL, 27–29 Tothill Street, Westminster, to arrive not later than first post on Monday, March 27. They must be accompanied by a coupon which will be published later.

BIRD'S-EYE VIEW OF A TYPICAL BUILDING EXHIBITION AT OLYMPIA.



PLAN SHOWING ARRANGEMENT OF STANDS AT LAST YEAR'S BUILDING EXHIBITION.

Some Governing Dimensions:

Length of Hall, 670 ft.
Length exclusive of Annexe, 439 ft.
Width (wall to wall), 250 ft.
Span of Main Roof, 170 ft.
Height of Main Roof, 100 ft.

Gallery at Entrance, 24 ft. deep.
Galleries on three remaining sides, 39 ft. deep.
Pillars supporting galleries, 15 ft. 9 in. high and 34 ft. c. to c.

Arched girders connecting pillars, 17 ft. 4 in. from floor level at highest point of soffit.
Average width of gangways, 8 ft.

(*See Particulars of Competitions announced on preceding page.*)

Sydney Smirke

By E. BERESFORD CHANCELLOR

IF he never quite attained the fame of his brother Sir Robert, Sydney Smirke has left in London sufficient evidence that he was a sound and capable architect, who could be relied on to produce work of ı adequate and appropriate character, even if it was ever informed by the touch of genius which enabled other llowers of his profession to rise above the level of conientious, painstaking designers. As we shall see, he aims a place here for other reasons than the output hich he achieved, and it is rather as a potential townanner and theoretical would-be improver of London that

ENTRANCE HALL OF THE CONSERVATIVE CLUB. SMIRKE AND BASEVI, ARCHITECTS.

e deserves to be remembered with gratitude and respect. or it is a fact that there have been few improvements in ıe metropolis which he did not adumbrate or suggest, and would seem that opportunity alone was wanting for him) have achieved fame in this direction, which it has been ıe lot of others to compass at a later day.

Before saying anything of Smirke's suggested improveıents in London, it will be well to set down the chief ents of a not, after all, particularly eventful life, and to ote the various works which he actually produced.

Sydney Smirke, a younger brother of Sir Robert Smirke, nd therefore son of Robert Smirke, R.A., the artist, was orn in London in 1798. In 1817 he became a student at ıe Royal Academy School, and eventually a pupil of his rother, with whom he was subsequently associated in the erection of various buildings. Indeed, so much was this the case that for a time his history may be said to have merged in that of the older man. In 1819 he gained the Royal Academy's Gold Medal, and in the following year set out to visit the Continent, travelling in Italy and Sicily, among other countries.

On his return to England he was occupied in the erection, or reconstruction, of various country houses; but it was not till 1828, when he obtained the post of surveyor at St. James's Palace, that he first took a more or less prominent position as an architect. Six years later he is found reconstructing the Pantheon. The next date of importance in his career is 1841, when he succeeded Sir Robert Smirke as surveyor to the Inner Temple. In this position he did some notable work, particularly in the restoration (in which he was associated with Decimus Burton) of the Temple Church, the erection of the sets of chambers adjoining Paper Buildings, which became irreverently known as "Blotting Paper Buildings," on account of the red brick in which they were constructed, and the rebuilding of Inner Temple Hall (although the last did not take place till 1869).

Between 1843 and 1845 Smirke was engaged, again in collaboration, this time with Basevi, in the erection of the Conservative Club, on the site of the Thatched House Tavern, while during the same period he was engaged on

INNER HALL OF THE CONSERVATIVE CLUB. SMIRKE AND BASEVI, ARCHITECTS.

making additions to Bethlehem Hospital, additions that were begun in 1843, and only finally completed in 1868. Twenty-one years before this latter date, he had succeeded his brother as surveyor to the British Museum, and the portions of that vast building due to his hand were the new Reading Room, begun in 1854, and first opened three years later, the west wing, and the elaborate railings which screen the great forecourt from the street. The Reading Room is a splendid monument of Smirke's achievement. Its proportions are fine, its space ample, its arrangement excellent, and the many millions of readers who have used it owe a debt of gratitude to the man who so adequately catered to the wants of a not always easily pleased section of the community. I have never met anyone, nor have I ever heard of anyone, who has, with any real reason, criticized that stupendous literary beehive.

Every one should remember the name of the man who designed the British Museum Reading Room, but it is probable that the best remembered achievement of Sydney Smirke is the Carlton Club, which he rebuilt in 1854–6. This building is notable for many things; and if it cannot compare with the Reform next door in architectural excellence, it is at least one of the most splendid club-houses in London, and is, besides, interesting in that it marked an innovation—polished granite being here for the first time introduced into a London structure.

Smirke became an A.R.A. in 1847, and a full R.A. in 1859, and held the office of Professor of Architecture from 1861 till 1865, and that of Treasurer till 1874, when he retired. He was, besides, a Fellow of the Royal Society and of the Society of Antiquaries, and held other subsidiary honours. He lived for a number of years at 28 Berkeley Square, but died at Tunbridge Wells in December 1877.

Smirke did not publish much, but he wrote *inter alia*, an account of the Temple Church, and a short memoir of C. R. Cockerell. One thing, however, he produced was of special importance, for it contained his views on what might be made of the London of his day, in the direction of re-alignment and betterment. The volume is entitled "Suggestions for the Architectural Improvement of th Western Part of London," and was issued in 1834. I consists of 117 pages of letterpress, with a plan and tw engravings showing some of the writer's more ambitiou architectural designs, one for a Parliamentary Building somewhat on the lines of the great Law Courts at Brussel which would have been situated, had it ever emerged fro its academic stage, in the Green Park; and the other fo what he called "A National Edifice to Receive the Monu ments of Illustrious Men," which he suggested should b erected on the north bank of the Serpentine.

The chief value of Smirke's publication, however, lies i the schemes he adumbrated for the improved town planning of the western part of London. It is impossib to follow in detail all his suggestions, but some of the must be referred to because, as I have before noted, man of them have since become *faits accomplis*. "Among th most obvious improvements that even a cursory glanc over the map of London suggests," he writes, "is th extension of Piccadilly and Coventry Street towards th east." This was to be effected thus: "The two sides o Sydney's Alley should be pulled down, the houses on th left rebuilt on a larger scale, and their fronts brough forward in a line with the north side of Coventry Street the houses on the right side would, of course, be wholl removed." On the east of Leicester Square, Smirke sug gested the wholesale alteration of the buildings on th north side of Bear Street, and the pulling down of those o the north side of the narrow alley which then led int St. Martin's Lane.

The result of these demolitions would thus have been direct road from Piccadilly to Covent Garden Market, an Drury Lane and Covent Garden Theatres, "those splendi establishments," as he terms them. In order to provid for a suitable open space, he proposed a piazza in the for of a quadrant. In this suggestion he was happy, for on ten years after he had made it, it was carried out, Cra bourn Street being enlarged by the demolition of its sout side, in 1843, at the time when Coventry Street was al enlarged, and a continuation made through Sydney All

nd Cranbourn Alley to Long Acre; and although the pro-osed piazza was not then accomplished, the more recent ormation of Kingsway has produced what Smirke hoped is plan would effect, the extermination of those slums nd "courts of very indifferent pretensions," as he calls iem, which once abounded here in a sort of hideous onglomeration.

Although Smirke did not put forward a scheme so drastic id wholesale as that by which Kingsway and Aldwych ime into existence, nevertheless his less far-reaching iggestions tended towards the same end. His remedy for ie obliteration of Clare Market and its purlieus, that compound of impurity and olefiance," to use his own ords, was the construction of a wide avenue through the ntre of this unsavoury district, which would have run om the corner of the piazza he proposed to Carey Street, id would have been connected with another curvilinear enue joining the Strand just west of St. Clement's urch, which would have been nearly indentical with the esent east branch of the Aldwych curve. Smirke further ggested a continuation of this to the north in order to ik up the west side of Lincoln's Inn Fields with the rand, while another street was to form a continuation Serle Street, and to run direct to the Strand, entering by Pickett's Place; "the Fields" would also have been ined, adequately, to Holborn by the widening into a reet of Little Turnstile. By this scheme a broad oroughfare would have linked up Holborn and the rand, and would have entered the latter at a more nvenient and less narrow spot than does Chancery Lane. is true that Gwynn had proposed, earlier, a somewhat nilar improvement, but Smirke's was of a far more mplete character. Both these town-planners also pro-ded for the widening of St. Martin's Lane and its junction with Oxford Street, but again Smirke's suggestions were of a more drastic character than those of the earlier man; while he followed Gwynn's lead in proposing a continuation of the Haymarket northwards so that it should enter Oxford Street on the east side of the Pantheon, a building which, as we have seen, he rebuilt, and for which he was anxious to provide this advantage. Smirke foresaw that increasing traffic would benefit by another wide thoroughfare as a valve, so to say, to Regent Street, and did not hesitate to propose what must then have seemed an unnecessary innovation.

Another scheme in which Smirke anticipated what has come to pass was the continuation of the Mall to Charing Cross, and this great improvement follows pretty closely what he suggested. The reconstruction of the roadway at the west end, forming part of the Victoria Memorial, has also carried out, to some extent, the architect's plan for extending the Mall round the south side of Buckingham Palace, and thus joining it to Buckingham Palace Road. He likewise projected a roadway across St. James's Park, in a direct line from St. James's Street to Birdcage Walk, and so onward to Rochester Row. That a portion of St. James's Palace would thus have had to be demolished and the rural charm of the park obliterated seems not to have occurred to Smirke, in his desire to create large spaces and convenient outlets. His anxiety to abolish what he calls "unutterable abominations" went hand in hand with his wish to provide London with splendid thoroughfares. In this he was, as Gwynn had been before him, anticipating a day when thought is given to such things, as well as to hygiene and the better accommodation of the poorer classes; and if not as a pre-eminent architect, at least as a pioneer in town-planning, his name deserves to live honourably.

MORNING ROOM OF THE CONSERVATIVE CLUB. SMIRKE AND BASEVI, ARCHITECTS.

Correspondence

Experiences of a Housing Commissioner

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—With regard to the charges brought by Sir Charles Ruthen, Director General of Housing, against the architectural profession, I think it my duty to narrate what was my experience while Housing Commissioner from March, 1919, to September, 1921.

(*a*) The plans, etc., submitted by architects for the local authorities in the region were very rarely in excess of the standard set in the "Manual for State-aided Houses," issued by the Ministry of Health in 1919, and in the model form of specification similarly issued.

(*b*) The Ministry, soon after the inception of the scheme, began reducing their own standards, and continued doing so until contracts were stopped in 1921. This policy of reducing amenities was never publicly given out, and architects could only become aware of it by finding their plans and quantities, drawn up in accordance with the Ministry's Manual, cut down in the office of the Housing Commissioner.

(*c*) Commissioners continually advised the Ministry against this policy of attrition.

(*d*) The control of the situation was all along entirely in the hands of the Ministry through memoranda which they issued to the Commissioners. Any detail of plan or specification which exceeded the instructions (to Commissioners) of the Ministry was as a matter of course cut out. Moreover, even if the plans were in accordance with the Ministry's standard at the time they were submitted, yet if the lowest tender exceeded the Ministry's limits, the amenities were cut down still further by Commissioners under the orders of the Ministry. Not infrequently further excisions took place at the Ministry itself, after the plans had been passed by the Commissioner.

It must, therefore, be clear to any impartial person that the architectural profession is blameless in the matter. I am not an architect, nor am I now an official, and, therefore, may perhaps be considered to hold a neutral position.

E. N. MOZLEY,
Lieut.-Colonel, R.E. (retired).
Late Housing Commissioner for the South-West of England.

Architectural Competitions

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Your correspondent "Palman qui meruit ferat" has a very good cause for "grousing."

Conditions for entry and regulations for competitions are certainly superb, but *why should* the assessor "go home" after he has made his selection? With the innumerable architects struggling to revive their war-ruined practices (both by reason of service and otherwise) have assessors no regard for esprit de corps?

The profession in general surely h the right to expect from "one of t own" some indication of designs pla without it being included in R.I.B regulations that they *must* do so.

"ANOTHER COMPETITOR.

Cambridge Architects' Cl

To the Editors of THE ARCHITECTS JOURNAL.

SIRS,—At a dinner held last month the Arts Club, it was decided to for small club consisting of architects w had been educated at Cambridge Uni sity, in order primarily to give the Sch of Architecture at Cambridge the ma support of a section of the profes which is naturally most sympathetic w its objects.

I have circularized all members of R.I.B.A. whom I know to have gradua at Cambridge, but I am anxious to ge touch with those who are not include the ranks of that body, and I there venture to make use of your columns w this object.

If, therefore, any of your readers have been up at Cambridge, and would care to join this club, would c municate with me, I should be extrem glad to receive their names and give th any further particulars.

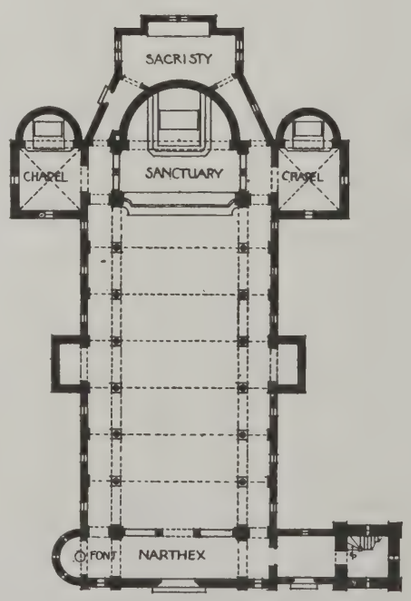
The appointed officers of the club a Chairman, Maurice E. Webb; Hon. and Treasurer, J. Alan-Slater.

J. ALAN-SLATE
Willow Hill, 18 Wellgarth Road, Hampstead, N.W.11.

New Church at Droitwich

THE Church of the Sacred Heart and St. Catherine has been erected at Droitwich from the designs of Messrs. Peacock and Bewlay, of Birmingham, architects. In accordance with the wish of the donor the architects have endeavoured to introduce into the work the spirit of the early Christian basilicas as seen at Rome and Ravenna, and to this end restraint has been exercised to avoid elaboration of detail. Externally the walls are finished with rough-faced bricks of varying tones of colour, and the main roofs are covered with Italian and tubular tiles.

The church provides seating accommodation for 200 in the nave; and there is an organ gallery over the narthex, and a chapel on either side of the sanctuary. The nave is divided from the side aisles by closely spaced unpolished grey granite columns with stone caps and stilting blocks, from which spring plain square-edged arches carrying the clerestory walls. Between these arches and the window over there is a deep band available for mural decoration. The walls are finished in rough plaster; the roof is of untouched pitch pine; the floor of the aisles is paved with brownish-buff quar-



PLAN OF THE CHURCH OF THE SACRED HEART AND ST. CATHERINE, DROITWICH.

ries; and the sanctuary floor is of ma The walls and the vaulted roof of chapel on the epistle side are t treated in mosaic to illustrate inci in the life of St. Catherine. These dents have been designed by Mr. Ga Pippet, of Oxford, who is also responsib the mosaic decoration to sanctuary ar

Messrs. J. Parnell and Sons, of R were the general contractors, and sub-contractors were as follows: V Travers Co., Birmingham (asphalt fl E. P. Blockley, Hadley, Salop (fa bricks); Trussed Concrete Co., Lo (domes to chapels and sanctuary); Edwards, Ruabon (floor tiles); H. J C. Major, Ltd., Bridgwater (Italian ing tiles); Harvey and Ashby, Birm ham (casements and casement fitti Acme Flooring and Paving Co., Lo (wood-block flooring, parquet); Art F ments and Decorations, Ltd., Lo (mosaic, marble, and stone flooring Hill and Sons, Birmingham (gasfitt Harvey and Ashby, Birmingham (st glass and leaded lights); The Birmin Guild (art metal work); Fenning & Ltd., London (high altar marble w Couzens and Akers, Birmingham (he and ventilating).

Current Architecture. 146.—Church of the Sacred Heart and St. Catherine, Droitwich

Peacock and Bewlay, Architects.

The exterior of this very simple and therefore prepossessing church is finished with rough-faced bricks of varying tones of colour. The main roofs are covered with Italian and tubular tiles. The campanile stands away from the nave in the Italian manner, but is connected to the building by a lobby which is a continuation of the narthex. Each side of the sanctuary there is a chapel; and chapels and sanctuary have apses which, as can be seen in the lower illustration, are expressed externally like the aisles. The sacristy is behind the sanctuary.

This view of the nave looking towards the entrance shows the organ gallery over the narthex, and the broad bands available for mural decoration above the arcade which supports the clerestory. The arches spring from unpolished grey granite columns with stone caps and stilting blocks. The walls are finished in rough plaster, the roof is of untouched pitch pine, while the floor of the aisles is paved with brownish-buff quarries. The nave provides seating accommodation for two hundred people.

Current Architecture. 148.—Church of the Sacred Heart and St. Catherine, Droitwich : View of North Aisle Looking East

Peacock and Bewlay, Architects

In accordance with the wish of the donor, the architects have designed this church in the manner of the early Christian basilicas such as those found in Rome and Ravenna. The columns of the aisles are of unpolished grey granite, with stone caps and stilting blocks, from which spring plain, square-edged arches carrying the clerestory walls.

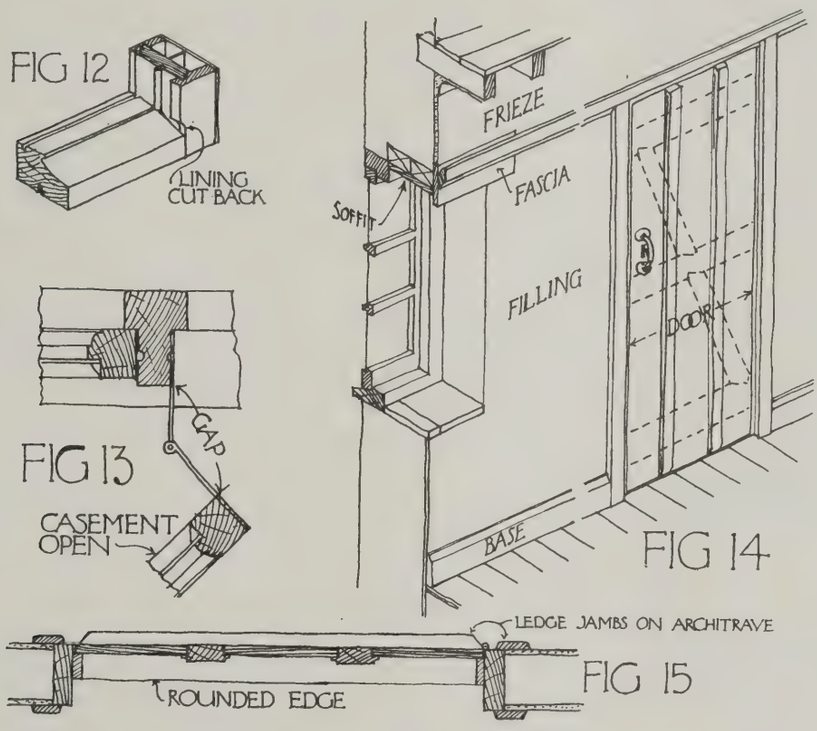
Little Things That Matter. IV—Inside

By EDWIN GUNN, A.R.I.B.A.

Windows.—All surveyors who have epared schedules of dilapidations are miliar with the unfailing decay which tacks the outside lining of a sash-frame the point of juncture with the oak cill, ie chiefly to the water-holding forma- on at this point. The checking back of e lining to the face of the pulley stile, in Fig. 12, counteracts this tendency. In wood casements an unsightly dent ually soon arises on the closing side of e frames and mullions, due to the ckspur fastener fouling the edge. This ay be overcome by fixing at this point extra slot-plate recessed in the frame, vel with the outside edge, and at the me time the advantage is cheaply se- red of a two-point closing, with slight ntilation when required. Similarly the curtains, which most people want during the winter months. A concrete lintel does not take kindly to attempts at attachment. These needs are met when the window-heads are arranged at such a level that the picture-rail carries over. Incidentally the apparent scale and restfulness of any room is greatly enhanced when the wall surface is definitely conceived in bands with as little interruption as possible, and the space above the door and window-heads, which is the most important of all, should not be broken into unless it is unavoidable. Where wood lintels are used internally (and for cheapness and simplicity over moderate spans they have no rivals), a good method is to fix them flush with the brickwork and cover them with a wrot fascia and soffit as shown. This method provides ample fixing as well as slight latitude for the adjustment of the picture-rail. I know of nothing to beat a plain flat or slightly moulded flat picture-rail about 2½ in. deep, which appears less as a strip on the wall than as a capping to the filling, so that the wall becomes base, filling (with cap), and frieze (Fig. 14).

Doors.—There is nothing new to be said about panelled doors, and (to be Irish) what there is new about ledged doors is old—but forgotten. First, as to bracing: a much stiffer and more sightly door is produced by bracing straight through than by what may be called zigzag. The latter looks particularly bad when the ledges are unevenly spaced, and the braces, therefore, not parallel. A very pleasant old-fashioned ledged door was made up of boards differing alternately in width and thickness, the thicker boards being related and delicately moulded to cover the wider thinner ones (Fig. 15). The hanging of ledged doors to linings with architraves is not so easy as it looks, unless it is convenient to have the door "inside out" and fix the strap-hinges or cross-garnets on the opposite side to the ledges. If hung on the other (and normal) side, either (1) the hinges are screwed along the ledges and the door when open presents a gaping slit on the hanging side; or (2), if screwed to the boarding, as soon as the door is opened square the ledges foul the architrave, unless they are either chamfered off at the ends to a considerable angle or stopped an inch or so short of the edge. Neglect of one or other of these precautions soon results in the door being wrenched off the hinges.

Two further small points as to doors are: (1) don't fix linings in breeze or similar slab partitions; use solid frames with the posts carried up as horns to a secure fixing at the floor or ceiling above; (2) an oak or elm slip ½ in. thick, as wide as combined thickness of door-stop, and rounded on the edges, is a good thing to raise doors over a carpet and exclude consequent draughts as well as often serving to cover the joint between, say, tiles and wood flooring.



ng of two pins with proper knuckle- nted casement stays provides a supple- ntary window fastening, and is well rth the penny or so involved. It is en difficult to arrange an uneven nber of lights on an upper floor so that exterior can be cleaned without the of ladders. If the odd light be hung parliament (or shutter) butts made hanging outside shutters, folding into ½ in. brick reveal, the casement will ow clear of the hanging side when ned, leaving a gap through which the d and the arm may be passed for ning. See Fig. 13.

rovision for curtains often creates a ty problem to the owner after the lder has left, particularly the inner

Additions and Alterations to "Higham," Northiam

"Higham" was originally an early sixteenth-century house, although most of the Tudor features had disappeared. Additions were made in the seventeenth century, further additions in the eighteenth century, and many more in Victorian times. Some of the latter were both unsightly and unsatisfactory, and showed the absence of either knowledge or competent guidance. The original building was constructed of timber (oak) and plaster; and most of the additions were timber studding, covered with weather-board or tile hung, except the east front, where the studding had been lathed and plastered, with a finishing coat of grey cement, which was more or less hidden in summer by creepers of the commoner kinds.

It was decided to treat the house as Georgian, in accordance with the character of the principal visible features. The proportions and efficiency of the north-east angle rooms (dining-room and No. 1 bedroom) being unsatisfactory, fresh ones were designed, and as their cill and head levels must differ from other windows in this elevation they were of different form, so as to avoid dissimilar similarity unpleasing to the eye. All four lights in these windows were required to open and, as at the time they were ordered it was impossible to get special sections rolled, it was necessary to devise built-up frames from such sections as were obtainable. Figure (i) shows how this was done. The

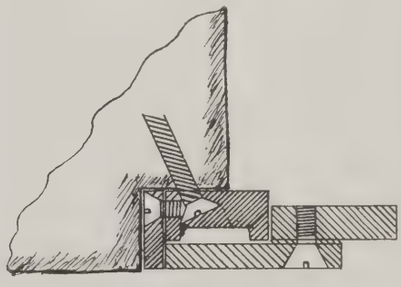


Fig. 1.

edge of the opening portion of the casement is $\frac{3}{16}$ in. thick, and the maximum thickness of this frame is barely $\frac{7}{16}$ in. Although the casements are 52 in. high, they are not whippy, and have satisfactorily stood two years' use. Each is furnished with two turns for securing closely when shut. As the semi-circular heads would carry no weight, the studding had to be trimmed accordingly. The lead aprons are secret.

The stucco was stripped from this front, which was then boarded, felted, lathed, and hung with old, plain weather-tiling. The tiles were drilled at intervals, and vine eyes screwed to the wood backing, so that wires to support roses might be fixed to them as required. The importance of accentuating the entrance suggested a good Georgian doorway. It happened that a very handsome one with Ionic columns was available, and suitable Portland stone steps up to it were designed. The old chimney over this doorway had been cemented long before, and the cement had weathered so well that nothing would have been gained by disturbing it.

The villa-like approach was transformed by carrying the drive straight through past the north end of the house to a space in front of the garage, where cars could turn after setting down at the end of the paved terrace. The lawn is enclosed by yew hedges, within which are borders, planted with roses and other flowering plants under Mrs. Skipwith's experienced guidance.

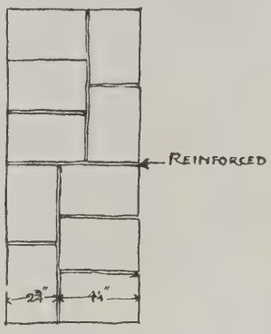


Fig. 2.

The south front wall was covered with weather tiling hung on laths without any backing. It was therefore rehung in the same way as that of the east front. The removal of the fir trees greatly increased the lighting of the parlour, and this was further improved by substituting a wide bay window (with seat in it) for the glazed doors and high window found there.

Plans are shown of the ground floor before and after alterations. Owing to settlements, to additions having followed varying ground levels, and the haphazard way in which alterations were carried out, there are few right angles and fewer horizontal floors in the building. Walls vary in thickness, and often a partition on one floor is double the thickness that it is on the other; it may happen the thicker wall stands on the thinner. Many full-size details were necessary, and the process of uncovering entailed modifications as work progressed, and many curious problems presented themselves.

To provide room for a wider staircase the wall on west of the hall, which was the original external wall of the hall house, was replaced by a 7 in. brick wall in cement, with a 6 in. strip of expanded metal every 3 ft. (Fig. 2). To obtain greater headroom immediately through the west arch, the floor joists over were laid flat and increased in number, and a sheet of Eternit substituted for lath and plaster ceiling. The elliptic quadrant screen through the west arch made the best of the restricted space available for two passages. A new mantelpiece was designed for the hall; and all four step-ladders were scrapped, one principal and one service staircase being substituted. A fresh opening was made between the hall and inner hall, and archways to this and to the parlour steps were designed in conjunction with the principal staircase. The existing doors and dado panelling, etc., were retained, and their details adopted for the new work; and a new exit to the garden was provided from the smoking-room.

On the first floor the slopes of the floors, varying angles, and restricted space w troublesome. Just as the service qu ters had been cut off on the ground fl so the first floor was divided into th groups of apartments: (i) own bedroc (Nos. 1 and 2) and own bathroom; guests' bedrooms (Nos. 3, 4, and 5) a guests' bathroom; (iii) maids' bedroc (Nos. 6, 7, and 8) and maids' bathroo all No. iii being entirely cut off from rest of the house. The airing cupboa in bathrooms were furnished with w towel rails and hot water coils on floors of the cupboards.

An "Artesse" stove was placed in new fireplace of the hall. A four-li sixteenth-century window between passage on the first floor and the stairc well was retained in position when new 7 in. wall was built, and left ungla to facilitate the circulation of warm from the hall to the first floor.

Reference has already been made alterations to parlour windows. modernized open fireplace at its west was bricked up, and a small one desig with bookshelves on either side. In room was a post in the centre at the int section of two great oak beams; and floor-boards in the bedrooms overhead w removed, exposing the back of the be across the parlour. A channel was the whole length of this to take the sten a 4 in. by 3 in. steel T, which had a bear of 3 in. at each end where it was let i the mortices of the wall posts. It screwed through the flanges to the be by means of coach screws. Two ½ bolts, 9 ft. long, were passed through beam from below, the heads being co tersunk in the soffit of the beam, and holes filled with oak pellets. These b were carried up in the thickness of partition between the bedrooms, wh was immediately over the beam, bolted to a large oak tie beam in second floor attic. To prevent spreading, in case of future settlem steel angle cleats were screwed v coach bolts to beam and wall posts their angle of junction. Without long bolts the steel T would have b adequate as fixed, but as the parti permitted the addition of the long b it was a small matter to add t (Fig. 3).

All the plastered walls are left natural warm cream colour of the plas which was finished with the float. colouring of the new joinery of the and the parlour is temporarily c grey over chrome-yellow, but the ultim colourings of these are to be a work Mrs. Skipwith and an interesting occ tion of the future.

(*Continued on page 276.*)

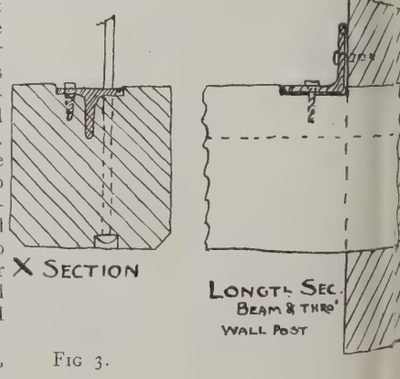
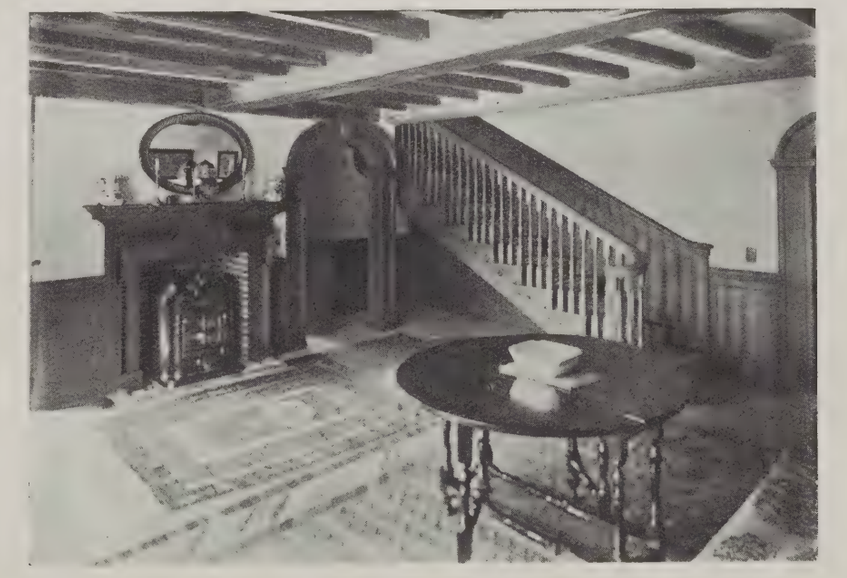
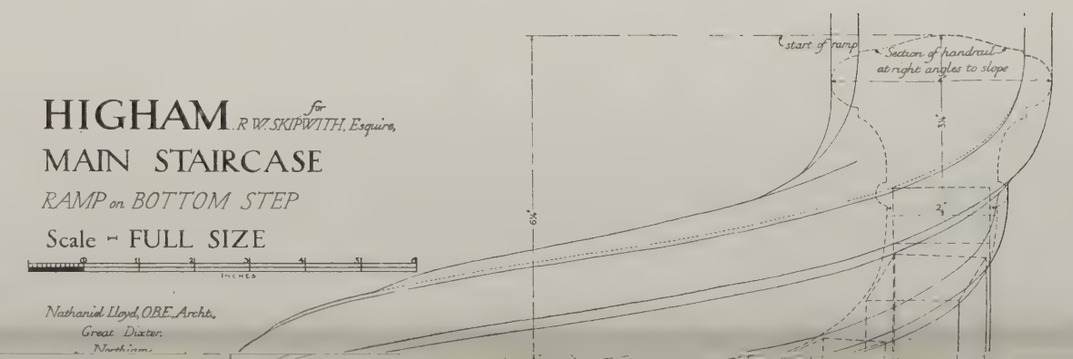


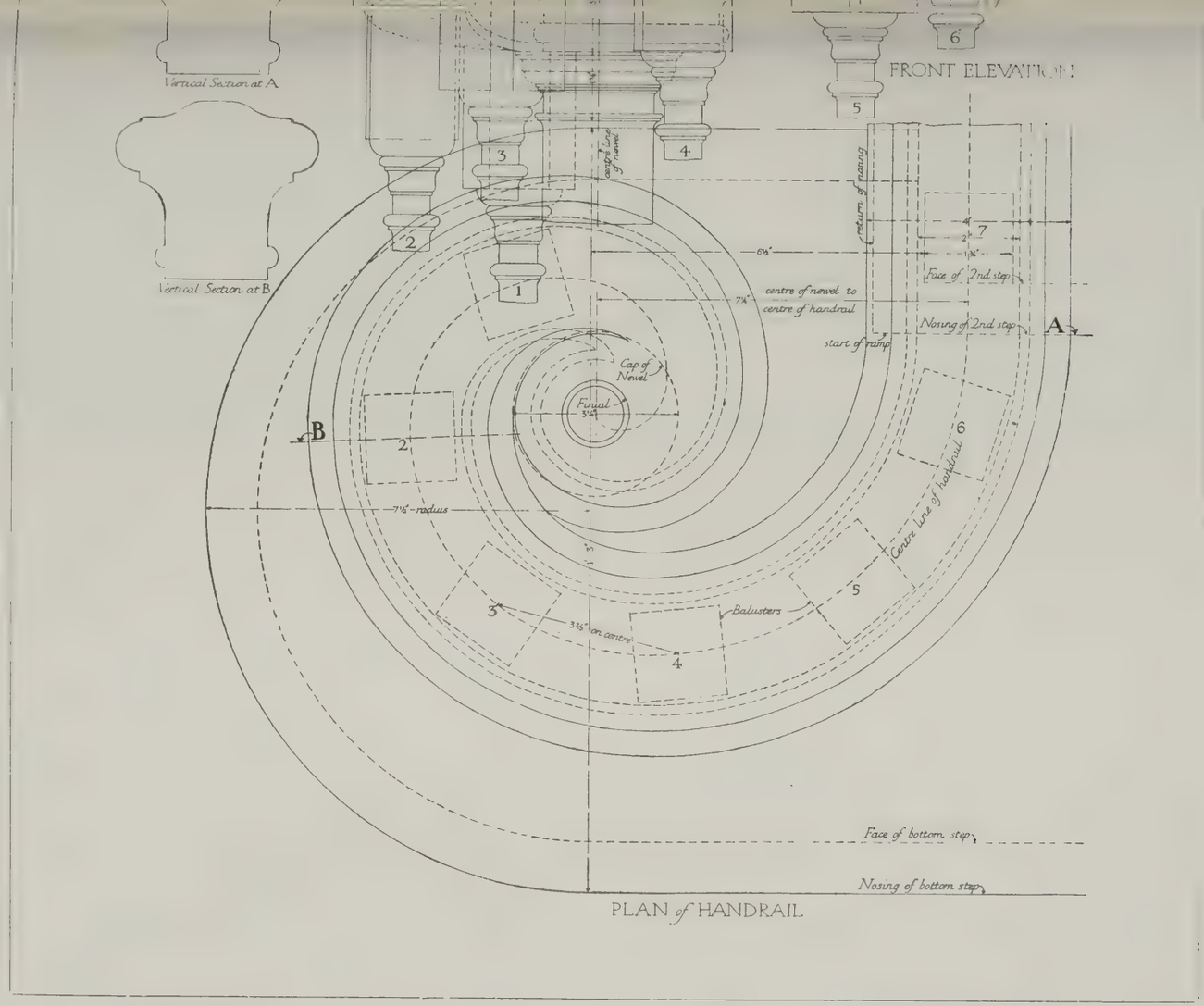
Fig 3.

Architects' Working Drawings. 51.—Ramp on Bottom Step of Main Staircase, "Higham," Northiam

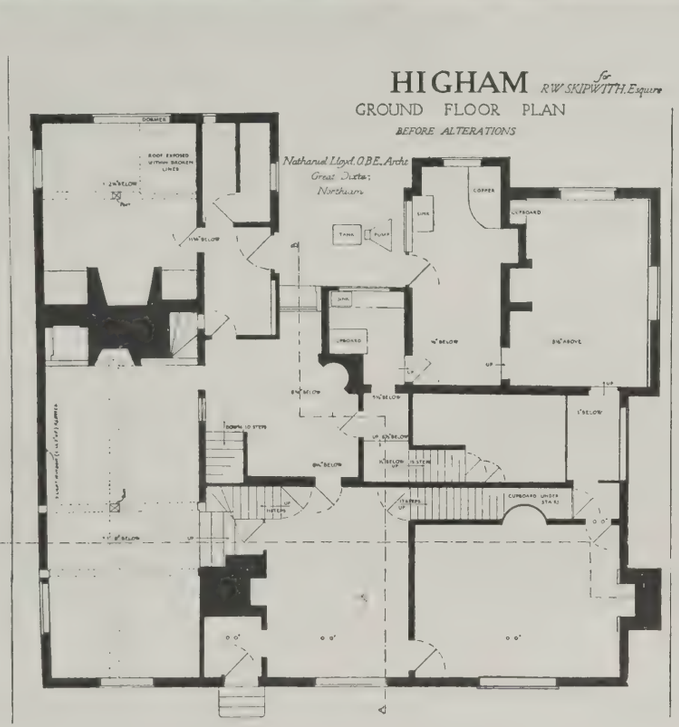
Nathaniel Lloyd, O.B.E., Architect

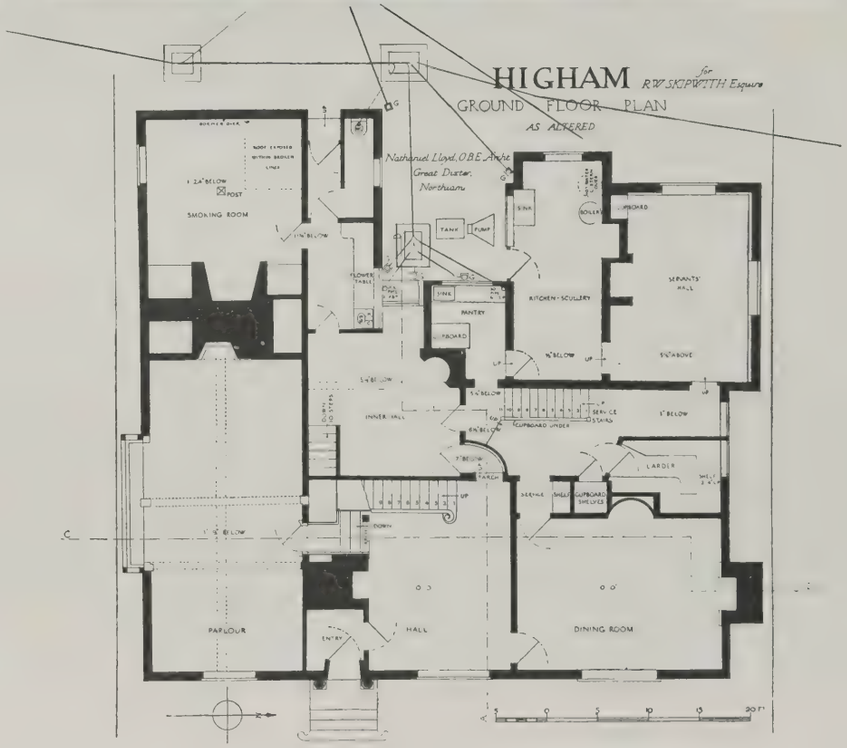




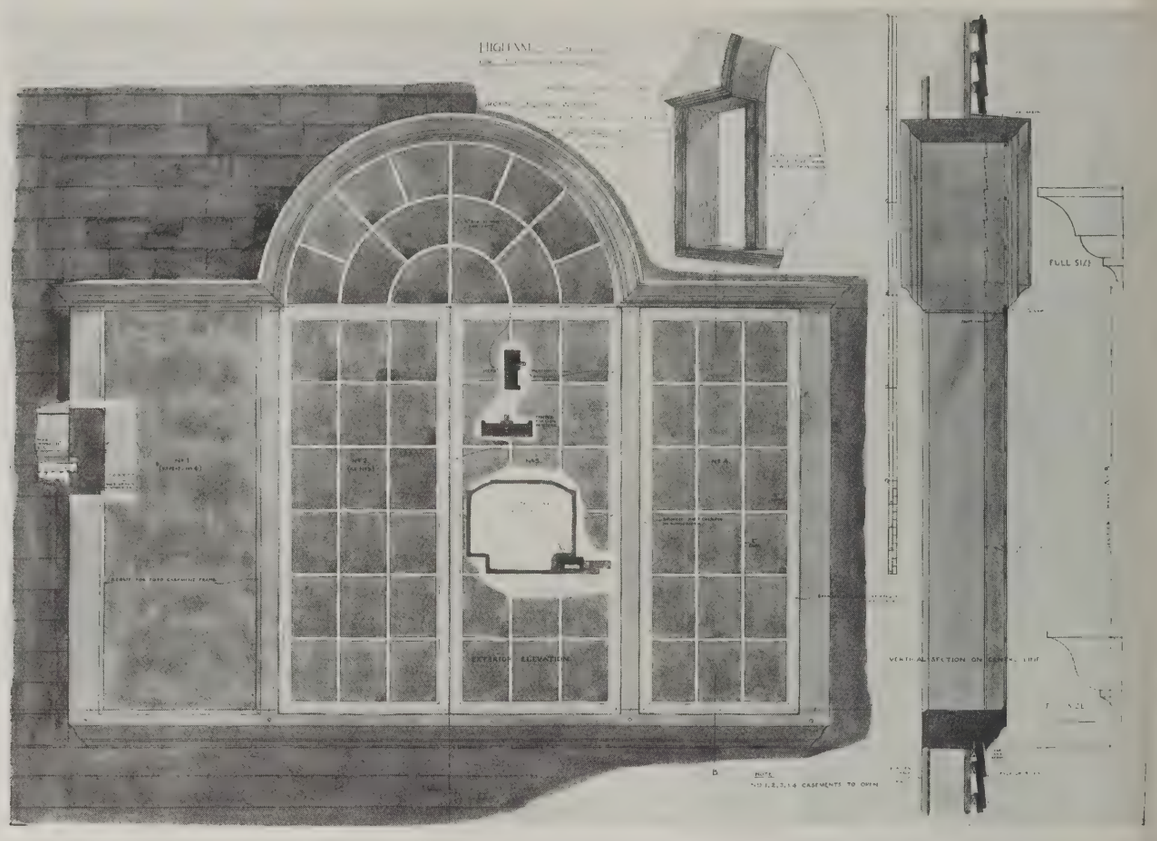


In the original house, before alterations took place, the first floor was reached by means of four step ladders, but these were scrapped by the architect in the course of reconstruction, and two staircases were substituted. A drawing of the ramp on the bottom step, and a general photo of the main staircase, are shown above. The staircase wall, shown in the photo, was the original external wall of the house. It was 12 in. thick at ground floor, but only 7 in. thick at first floor (having been revised many times), so that as greater width was demanded for the staircase, this wall was destroyed and replaced by a 7 in. brick wall in cement with a 6 in. strip of expanded metal every three feet. Several extra inches of valuable space were thus obtained.





"HIGHAM," NORTHIAM: BEFORE AND AFTER ALTERATIONS.



GROUND-FLOOR WINDOW AT "HIGHAM," NORTHIAM.

The general contractors were Messrs. John Perigoe and Son, of Northiam; the sub-contractors being as follows:—William Saunders and Son, Kemp Town (casements and casement fittings); Smith & Wellstood, Ltd. ("Artesse" Anthracite for general heating of hall and passages); John Perigoe and Son, Northiam (plumbing and sanitary work); H. Pontifex and Sons, London, and J. Bolding and Sons, London (sanitary ware and fittings); E. Dann-Sharpey, Rye (electric wiring); J. Perigoe and Son (special woodwork); E. Dann-Sharpey, Rye (electric bells); London Warming and Ventilating Co. ("Kooksjoie" cooking range, domestic hot and cold water services); W. Tedham, Northiam (garden seat).

Electricians' Settlement

A mass meeting of engineers employed in electric railway generating stations and sub-stations, and belonging to the National Union of Railwaymen and the Electrical Trades Union, at the Memorial Hall, Farringdon Street, have ratified the provisional agreement with the railway companies, and authorized it to be signed. It has been agreed that the sliding scale arrangement under what is known as the No. 10 Joint Industrial Council Award for the Electrical Supply Industry shall become operative. The effect of the new arrangement is that the men will in effect lose 6s. per week, the reduction being spread over a period of nine weeks. Thereafter their wages will be governed by the cost of living.

Official Architects' Association and Sir Charles Ruthen

The following resolution has been passed by the council of the Official Architects' Association: "The Council of the Official Architects' Association entirely endorses the action by the R.I.B.A. Council in respect of Sir Charles Ruthen's recent address on 'Housing,' which, however, it considers should be regarded as expressing personal rather than o architectural opinions. It empha moreover, that the author of address seriously reflects, and wi apparent justification, on the co tence of professional advisers in own and other departments. It fu records its views that a numbe points embodied in the address in tion are incomprehensible as expres of opinion by a professionally tr architect."

PARLOUR AT "HIGHAM," NORTHIAM, AFTER ALTERATIONS.

Current Architecture. 149.—Doorway to "Higham," Northiam

Remodelled by Nathaniel Lloyd, O.B.E.

In the remodelling of "Higham," Northiam, a "Georgian" treatment has been adopted. The importance of accentuating the entrance suggested a good doorway, and it so happened that the characteristic example shown above was available for use. The Portland stone steps which lead up to it are new.

R.I.B.A. Presidential Address to Students

MR. PAUL WATERHOUSE was exceedingly happy in his address to students. His words gave a ...t sense of that good comradeship and ...mpathy which lives between one who ...nature in our art and those who are ... its threshold. And among those who ...re present, one was conscious of a ...ceful presence embodying a keen ...se of humour.

Mr. Paul Waterhouse said that when ...ur old gentlemen, more dear and more ...ttle than he was, were asked to prepare ...resses to students on the distribution ...prizes, they said to themselves: "This ...a matter to which I feel I am well ...ted; I shall be very happy to do this, ... I know how to speak to young fel...s." These dear old gentlemen straight...y lock themselves up in their studies ...l resolve to write on something dis...ctly original, with the result that they ... said the same three original things. ...ose three things were the unfailing ...redients of an address to students, and ... would be wise in keeping to them. ...ey were: a congratulation to the ...idents on living in their present genera...n and under their present advantages; ... assurance that it is as satisfactory to ...e a prize as to win one; and, finally, a ...sperate assertion on the part of the ...aker that he, like his hearers, is a ...dent.

Proceeding, he said: If I keep alive ...se three traditional essentials to-night ...is not because I am quite sure that I ...ieve in any of them, but because I ...uld like to study them in something ...re than the conventional aspect. If I ... a student it is clear that I am not one ... the sense in which you are. There is a ...asure in acquiring knowledge, and, ...ng fond of pleasure, I sometimes still ...quire it; also there is a shame in being ...orant of certain things, and from time ... time I, like other seniors, try to fill up ...ne of the worst chasms of ignorance. ... these senses a man of my age may be ...d to be a student. But the attitude ...mind in my contemporaries and myself ... entirely different from yours. Up to ... age of twenty-five, or perhaps thirty, ...nan is engaged in a desperate struggle ... quarry for himself a certain bulk of ...owledge—if he falls below that bulk at ... given age he goes into life short of ...nething that he can rarely make up in ...er life.

What of the suggestion that you are to ... congratulated on the postponement of ...ur birth till the present generation of ...owledge? This is an interesting pro...m and a pretty difficult one. What can ... deduce from this? The obvious and ...st simple deduction is that the educa...nal burden on your generation is much ...avier than that laid on mine. If we ...ve it at that I can hardly offer you my ...ngratulations with anything like sin...ity. But is the deduction a fair one? ...on't suppose it is. Some will say that ...ery generation is more capable of ac...iring knowledge than the previous one, ...d that this is a symptom of the general ...rch of civilization from the savage to ...e man of supreme wisdom. I do not ...nk this is historically true.

Far be it from me to suggest that your generation is not an abler one than mine. I expect it is. But there were men in the thirteenth century, the first century A.D. and the fourth and fifth B.C., with whom we dare not for a moment compare ourselves. The fact is, I expect, that the ever-increasing burden of the bulk of available knowledge is counterbalanced by three things: One is that as knowledge grows, the means of acquiring it quickly also grow; another that a tendency to greater specialization lessens the individual load of the learner; and the last is this: that, after all, the race a young man runs is not a race against the general progress of universal knowledge, but a race against his contemporaries, who, being like himself receptacles of limited capacity, cannot any of them contain the uncontainable.

Gentlemen, to you who have toiled hard and been beaten, I offer *not* the mockery of the suggestion that honest defeat is a pleasure in itself, but downright common sympathy. I have been in your plight many a time and I know that it hurts. The best consolation is that which comes easily to every Briton, because we are a race of sportsmen.

The Vote of Thanks

Dr. Pearce, the Vice-Chancellor of Cambridge, said that he felt that he was under a great obligation to the speaker for his eloquent and witty address. There were a number of things in the address which he would take to heart, as he himself was called upon at times to give away prizes. With regard to the school of architecture at the Cambridge University he would like to mention the good work done by Professor Beresford Pite. The school was, perhaps, different from most others in that it was not primarily vocational. For he did not believe in vocational education in the University. During the war he attended a conference of Home and Colonial Universities, and throughout that conference the burden of his remarks was that Cambridge was not a place where a man might attend a number of lectures, nor was it a place where a man might learn the elements of a profession, but that it was a place where a man lived for three years.

Mr. Warren seconded the vote of thanks.

The Prizes and Studentships

After Mr. Paul Waterhouse had replied, Mr. Theodore Fyfe gave a very interesting commentary on the works submitted for the prizes and studentships. With regard to the Essay Prize for this year he wanted principally to draw prospective candidates' attention to the conditions which stated that the competitors would be expected to make a useful contribution to knowledge by accurate research. That important suggestion had been largely ignored in the present instance.

The six essays submitted this year were as follows:—

1. "Architecture: the Man in the Street and Architects."

2. "The Spirit of the Renaissance in Architecture and its Bearing on Modern Design."

3. "The Influence of materials and forms of Construction upon Architectural Design with particular reference to Reinforced Concrete."

4. "The Vault."

5. "Logic in Architecture."

6. "The Imaginary Architecture of Literature."

Apart from their subjects the essays were generally meagre in quality. The judges thought fit to give no award, but had given a certificate of mention to the best essay submitted, that on "The Imaginary Architecture of Literature," which was well done in its way and contained a lot of interesting information.

The Pugin Studentship had no entrants, and he feared that it was significant that the study of mediæval work was on the wane. He could not help feeling that although mediæval firms might not constitute a spoken word in building to-day, their study to the architect was as valuable as that of Greek to the educated man.

The Owen Jones Studentship afforded a very welcome exhibition of fine and effective draughtsmanship and colour. The holder, Mr. W. J. Knight, had shown six strainers which were full of most interesting work. The three strainers devoted to the gems of Ravenna, San Vitale, The Tomb of Galla Placidia, and the Baptistery, were admirably chosen and admirably drawn. The study of a portion of the interior of the Pantheon, Paris, was well done, though architectural setting was a trifle too like tapestry. An interesting set of drawings was shown on four strainers by Mr. Ridley. An entrant for the Prize selecting his studies entirely on England was, of course, handicapped; but one might suggest that the frescoes at Cromwell House, East Grinstead, hardly formed a colour subject.

Three designs had been sent in for the Soane Medallion. The entrants for this year's prize for "A central group of buildings for a non-residential university" were to be congratulated on tackling the subject under the conditions. The winning design by Mr. Alfred J. Brown had a well-conceived lay-out and placed the central group of buildings in a commanding position. It was apparent from the lay-out plan that there was a difference in scale between the central and other buildings. The dome over the central group sprang directly from the cornice of the main internal order, which was hardly weighty enough to give the proper effect of support to the expansive archivolts of the four penetrations, and the springing of these did not rise sufficiently clear of the cornice. A little additional "height" internally as well as externally would have increased the dignity of the dome. The design placed second, by Mr. Thomas E. Scott, which had been given a certificate of Honourable Mention, had not secured such an attractive lay-out. The dome in this case was rather too overpowering for its surroundings, though it was well worked out in itself. Minor practical defects were, insufficient

lighting to the central hall, and the too flat pitch given to the seating of the galleries.

The Henry Saxon Snell prize had not been awarded. The subject set, "An asylum for 200 aged and infirm poor," offered scope for good treatment. Of the two designs submitted, one, that of Lieut. K. H. Read, had been given a Certificate of Honourable Mention, but the plan was somewhat disconnected, and the presentation was not helpful to the design.

For the Grissell Medal there were four entrants, and the committee regretfully found themselves unable to make an award. The subject set was "A Mooring Mast for an Airship in Connection with an Hotel." But owing to some misunderstanding, the essential condition that there should be no buildings immediately round the base of the air-mast was not a part of the conditions as set. Of the four designs, one by "Nike Apteros," got clear of that disability, but the ferro-concrete construction was both faulty and unnecessarily heavy.

The meeting began on a note of sadness with the formal announcement of the deaths of Mr. Ernest Newton and Mr. Henri Favarger.

The Hon. Secretary, Mr. Arthur Keen, said: I deeply regret to announce the death of Mr. Ernest Newton, C.B.E., R.A., President 1914–17; Royal Gold Medallist 1918; Officier de l'Ordre de la Couronne, Belgium; Hon. Membre de la Société Centrale d'Architecture de Belgique; Officier d'Académie de France; Membre Correspondant de la Société des Architectes diplomés par le Gouvernement. Also of Mr. Henri Favarger, F.S.A., elected Fellow 1901. Mr. Keen spoke of the loss to the profession of so good and kind a man as Mr. Newton, and of his own great personal loss in losing a colleague in work and a dear friend in all that made a friend.

Mr. Paul Waterhouse spoke of the great sorrow that all must feel in the death of Mr. Newton, that the profession had lost a great man, and a very dear friend to many. In thinking of him and his work it was difficult to find the right word to express what one felt of his goodness of character. The word "innocence" conveys something. A man who injured no one. A gentleness of mind and touch, and with him always one felt in good fellowship. "His fellowship was invariably good."

The New Assistant-Secy. of the Society of Architects

Mr. C. A. Barman, the new assistant secretary of the Society of Architects, whose portrait is reproduced on this page, received his education in Norway, Belgium, and at the University of Liverpool, where he won the Lever Prize for architectural design. After devoting himself for three years to painting and modelling he took up the study of architecture, and during this time he founded and directed the "Independent Players," with Lascelles Abercrombie and John Drinkwater as vice-presidents. Mr. Barman's subsequent architectural experience was gained in the offices of a number of leading London architects, his last engagement before entering the Society of Architects being upon important emergency work

MR. C. A. BARMAN, NEW ASSISTANT-SECRETARY TO THE S.A.

for Sir Edwin Lutyens, R.A. Mr. Barman has contributed extensively to various periodicals, and is a member of the International Institute of Philosophy, of Amsterdam.

The Architectural Association at the L.C.C. Hall

In the nature of things, to build a structure of the size and importance of the London County Council Hall does not fall to the lot of many architects, and probably no building of recent years has occasioned so much interest as this one amongst the architectural profession. Externally the building already is a familiar landmark to Londoners, the river front with its daring innovations marking a further step in river architecture. When an opportunity occurred to explore the interior, through the agency of the Architectural Association's first spring visit, it was understandable that a large number of members should be present, and in spite of the inclement weather the party numbered about 120.

It was their second visit to this building, and since the last one, which took place two years ago, considerable progress has been made, and the work is now nearing completion. Mr. Ralph Knott, F.R.I.B.A., the architect, who was present, stated that he hoped to have all the work finished by June. Already a large proportion of the office room is occupied by the L.C.C. staff.

Approaching the building by the covered carriage-way from Westminster Bridge Road one is impressed by the scale of the vaulting, and the imaginative detail, reminiscent of a Piranesi plate. The carriage-way brings one to the courtyard, the façades of which are faced in stone, and are similar in character to the external elevations. This carriage-way and courtyard, which brings one to the heart of the building, is for the use of the members of the council, and gives a fitting access to that portion of the building where their work lies, and obviates any confusion with the work of the administrative staff, for whom entrances are provided in Belvedere Road.

From the courtyard one enters the building at the first-floor level, as the embankment level is a good deal below the level of Westminster Bridge Road, and this floor is devoted entirely to the purposes of the council members. Inter ally the corridors are the first point interest on this floor. They are well li and the details are Georgian in characte They are divided into bays, each of whi is vaulted and panelled to the springi line of the arches in oak, and the intersec ing lines in the vaulting are relieved b a bead-and-reel moulding. Vario committee-rooms, library, and counc chamber are on this floor, and we visited. The committee-room, whic provides accommodation for fifty men bers, together with a press gallery an public gallery, is divided into three po tions by screens, which can be raised an lowered into the floor, so making on two, or three rooms. It is panelled in oa with oak columns and entablature, an has an enriched plaster ceiling. Pane in the fireplaces at both ends of the roo and in the ceiling are left for decorati paintings, which are to be carried out b students of the Slade School and th Royal College of Art. Also decorati panels in other portions of the buildir are to be done by the students of th London County Council's Central Scho of Arts and Crafts. Skeleton tables we set up in these committee-rooms as a experiment to ascertain the most suitab arrangement for the seating, and throws an interesting sidelight on th great thought and trouble that mu have been taken in all the many detai that were seen.

The library, which was next visited, also fitted in oak, and it was noted tha air-tight fillets and hook-joints are pr vided to the bookcases to make the dust-proof. A charming feature of th room is a circular staircase in oak to gallery for books at one end.

The council chamber is still to be cor pleted, and, at the moment, is a fore of scaffold poles. Mr. Knott explaine the precautions which are being taken ensure that the acoustics will be sati factory, all steelwork being cased felt, and felt backing to three-ply boa papered in lieu of plaster.

The heads of the administrative sta have their rooms on the second floor, an many of these rooms were seen. One roo panelled entirely in Japanese oak w particularly attractive.

Those offices which were seen on t remaining floors were large and well l and accommodation is provided in the for a staff of 3,000. Luncheon and t rooms, with kitchens fitted with eve modern improvement, are arranged the top floor.

New and interesting views of Lond were seen from the roof, and one realiz from there that the site is situated ge graphically in the centre of Londo The tiling, as seen from the roof, is foun to have interesting details, a decorati motif formed by filling the cavity belo the ridge with diminishing pieces of t being particularly pleasing, and th could be repeated in domestic work wi advantage. Also the flashings to t chimney-stacks are carried out in til and the result appears a satisfactory or at all events in this case, where the roof of concrete.

At the end of the afternoon M Knott entertained the party to tea in t staff restaurant, and a hearty vote thanks to Mr. Knott was carried behalf of the A.A. members by th secretary, Mr. Yerbury. R. W. S.

The Unification Crisis

Position of the Defence League

THERE was no lack of drama at the R.I.B.A. last Tuesday week when a crowded meeting—it has been described as a bear-garden discussed with a vehemence that ...ered on acrimony the "to be or not ..." of Unification.

...is common knowledge that a ...B.A. Defence League has been formed ...r the leadership of Messrs. Cross, ...es-Wood, Perks, and Hubbard, with ...vowed object of making Unification ...itional on and therefore subsequent ... egistration, rather than an essential ...eminary. This is in direct opposition ...he resolution passed last May to the ...ct that "The principle of Scheme A, ...ely the bringing of all architects of ...United Kingdom into membership of ...R.I.B.A., be adopted as a basis of ...cation," and the leaders of the ...nce League evidently do not agree ... those who maintain that, quite ...t from Registration, Unification is in ... a good and desirable thing.

...accordance with By-law 65 the ...nce League accordingly requisi... a special general meeting to dis... the following motion :

"That this meeting is of opinion that ...conditions for the Unification of the ...ssion should form part of a Registra... Bill, and that the present system of ...ttance to the Institute, including ...ulsory examination, should con... in force until a Registration Bill be ...d." This meeting was held on Feb... 7, and as might have been expected, ...y lively discussion took place.

... a preparatory measure, the Unifica... and Registration Committee held a ...ing of their own, the president being ...e chair, at which the resolution of ... 1921, already quoted, was on Mr. ...'s motion reaffirmed with only one ...ntient voice, that of a prominent ...ber of the opposing party. Mr. ... recapitulated the history of the ...cation movement, and referred to ...ctivities of the various committees ... had been, and still were, working on ...scheme. In putting the resolution ...ggested the addition of the words ...eing understood that the architects ...red to satisfy the council that they ...properly qualified for the class to ... they seek admission," but this was ...tinally incorporated.

.... F. R. Taylor seconded, and Mr. ... Yerbury, speaking for the Licen..., said that they were prepared to ...rt the Associates in their proposals. ...e considered that objectors should ...al to the sub-committee not to the ...al body, and emphasized the fact ... a disunited profession could never ... to anything.

.... Buckland supported Mr. Yerbury, ...uggested that there had been much ...tent misrepresentation on the part ...e opponents of Unification.

.... Corlette, the original proposer of ...notion, agreed with Mr. Yerbury, ...eplored the lack of *esprit de corps*.

.... Perks rejoined that right and hon...le action was more sacred even than ... *de corps*.

Charles Ruthen's resignation from the vice-chairmanship of the committee was discussed, and it was decided not to elect a successor until the Society of Architects should again have a president.

The general meeting later on in the afternoon was marked by an unusually large attendance. The president, who occupied the chair, invited Mr. Cross to propose the motion for the discussion of which the meeting had been called.

Mr. Cross said that he hoped the subject would be brought to a definite issue. There were obviously differences of opinion, and a meeting was necessary at an early stage of the controversy. A good deal of opposition to the council's proposals existed, and he appreciated their action in convening a general meeting. Theirs was, he continued, a genuine attempt to reconcile conflicting opinions, all the more necessary because the controversy reacted disadvantageously on the Institute. The bringing of all architects into the R.I.B.A. meant voluntary unification without examination, and the adoption of examination tests was the only possible way of increasing their numbers. The scheme propounded by the late council would facilitate the absorption of the Society of Architects and of quack architects outside any society, and the prestige of the R.I.B.A. would be diminished by an influx of members. The surveyors and civil engineers had abandoned their proposed Registration Bills, and the council should not have given its support to Institute-wrecking proposals.

Mr. George Hubbard, seconding, said that there was no ill-feeling between the Defence League and the Associates Committee. It was proposed to throw open the Institute to all architects in the hopes that it would be able to speak as one man, and so have a better chance of obtaining Registration. But the Bill had no chance unless it could be shown that it was in the interests of the public, and the public was already protected by by-laws and sanitary inspectors. Let them go for a Bill first, then if necessary make sacrifices for the sake of Unification. The outside architect, he thought, did better as a free lance, and would refuse to come into the R.I.B.A. Unification meant embracing everybody, and would lower the prestige of the Institute.

Mr. Catchpole said he was opposed to the principle of bringing in outside architects before Registration had been obtained, and another member suggested that A.R.I.B.A.'s should resign en masse and form a new "Association of Qualified Architects."

Mr. Keen announced the resolution which had been passed at the earlier meeting, and also read resolutions in favour of Unification carried by Associates' meetings in various parts of the country.

Mr. Buckland said he wished to ask Messrs. Cross and Hubbard what would be the result of Registration ? It would involve the bringing of all architects into the R.I.B.A. or some kindred institution. What possible objection, therefore, could there be to preparing the way for getting the Bill through in the best possible way ? He deprecated the disloyalty of those members of the council who were responsible for the Defence League, and considered they should have retired from their official positions.

Mr. Buckland pointed out that there were no definite proposals before the meeting, and considered that they were prejudging a case which had never yet been stated. He proposed as an amendment "That in view of the fact that a committee which represents all sections of the profession has been appointed to consider and report upon all questions connected with the Unification and Registration of Architects, this meeting deprecates the public discussion of various views until the report of the committee has been presented, and considers that all suggestions and proposals for carrying out the expressed wishes of the profession should be sent to the Unification Committee for consideration." If the resolution before the meeting were passed all possibilities of Unification would be killed, and that was the all-important thing. Let them act as one common body in the interests of the profession.

Mr. Welch, seconding, said that anything which would defer a definite decision was undesirable. The question was not dormant, it was being actively dealt with, and they had no right to quash proposals before they had even been submitted. All schemes met with opposition, and Unification by general consent was impossible. The resolution of last May had been in force for months, but it was only when constructive work was begun that a destructive proposal was made. If the R.I.B.A. represented seventy-five per cent. of the architectural profession it would increase enormously in public importance.

Mr. Woodward and Mr. Perks were among those who spoke in favour of the resolution, and a long discussion ensued. The resolution found many supporters, but this was hardly surprising in view of the fact that the Defence League had been at great pains to whip up its adherents for the occasion. We venture to think that had the champions of Unification thought it worth while to employ similar tactics, matters would have worn a very different complexion.

Before putting the amendment to the vote Mr. Waterhouse, urging the Institute to know and speak its real mind, put in a powerful plea for support of the amendment. They were, he said, fighting against the unborn ; let it come to birth before they opposed it. The Unification Committee was fully representative, but the Institute was not yet ready to declare its mind.

Mr. Buckland's amendment was lost by 80 to 118 votes, and the original resolution was subsequently carried by 112 to 66. This, however, did not constitute the necessary two-thirds majority, and we understand that it is therefore invalid. It cannot, however, be ignored, and matters are, at the moment, in a highly critical position. It can only be hoped that native sense, impelled by a desire for the common good, will find a way out.

Law Reports

£1,100 Dilapidation Claim

Alexander v. Fraser.

Feb. 1. Official Referee's Court.
Before Mr. Edward Pollock.

Mr. Pollock continued the hearing of the action of Alexander v. Fraser, which had already occupied a week at the commencement of the current term at the Assize Court, Bedford, in which Mr. Joseph Turner Burton Alexander, as owner of the country mansion and park known as "the Bury," Pavenham, Bedfordshire, claimed upwards of £1,000 from Mr. Douglas Henry Fraser, the lessee, as dilapidations, on the expiration of his lease, on the ground that he had broken the covenants of two leases.

The case was continued at the Royal Courts, London, for its concluding stages, the whole of the evidence having been taken locally. It appeared that the damages claimed were £838 in respect of a lease of the house and grounds dated 1906 and a subsequent lease dated 1911 of certain farm lands. By the 1906 lease, which contained the ordinary repairing covenants, the plaintiff demised to the defendant the house, grounds, cottages, and buildings, with part of the park, for a term of fourteen years at a rental of £200 per annum. That lease expired in 1920, when it was alleged that defendant had not carried out his obligations in regard to repairs and the general upkeep of the premises. By the 1911 lease the plaintiff demised to the defendant several closes of arable and pasture land with farm buildings at Pavenham (ninety-four acres in all) for the term of eight-and-a-half years, at the yearly rental of £120. It was said that defendant had failed to keep the farm buildings, &c., in repair in accordance with the terms of his lease, and for that failure the plaintiff claimed £296 15s.

When Mr. Fraser took the house, said his counsel, the inside was in a bad condition, and it was entirely done up by Mr. Fraser. In September, 1911, Mr. Fraser sublet some of the farm land included in the second lease to a "third party," and to that tenancy a number of the items in the schedule of dilapidations referred. It had been alleged that the premises had not been well kept up, continued counsel, but in 1917, when Mr. Alexander visited them, he said that he was pleased to see that they had been so well kept, and the evidence went to show that when the lease came to an end the premises were in such a condition as would be expected after occupation by a good and careful tenant. The action, counsel added, had clearly been brought in the interest of Sir Geo. Lawson-Johnson, who was buying the premises, and wished to have them done up regardless of expense. He characterized the figures put before the court as grossly exaggerated.

The Official Referee, in giving judgment, said that the case was a somewhat curious one, because it was not an action by the lessor against the lessee, but an action by the purchaser from the lessor to recover something in reduction of his purchase money. He seemed to have made an agreement as part of his contract that the lessor should do his best to get as much as possible from the lessee as compensation for dilapidations. The property, it was to be noted, was sold as being in good repair, and he (the Referee) had come to the conclusion, upon the evidence, that during Mr. Fraser's tenancy the premises were kept in a fair condition of repair. He regarded the claim as being in many respects exaggerated, and after going carefully through the whole of the items he had arrived at the conclusion that the total amount to be allowed in the first case (claim of £838) should be £478. In the second case, which was a claim for £290 odd, he was of opinion that there had also been great exaggeration in the claim, and he came to the conclusion that the amount to be awarded should be £13 16s.

Judgment was accordingly entered for the plaintiff for £491 16s.

Builders' Claim for Drainage Work

W. F. and A. Long v. Hurlstone Hardy.

Feb. 3. Official Referee's Court.
Before Mr. Edward Pollock.

This was an action in which Messrs. W. F. and A. Long, builders, of 37 George Street, Richmond, claimed from Major G. Hurlstone Hardy, of "Old House," East Twickenham, the sum of £118 6s., balance of account of £218 6s. for work done and materials supplied in connection with the drainage at "Old House."

The defendant, who conducted his own case, denied indebtedness, and while admitting that plaintiffs had done certain work, alleged that it was not carried out in accordance with plans prepared and orders given. He further said that the bricks were not properly laid, that the gradients were defective, and that the manhole covers were not of the size and quality ordered. He counter-claimed £50 for alleged breach of contract.

Mr. A. F. Englebach, appearing for the plaintiff, said that Messrs. Long were a well-established firm of builders at Richmond, and had carried out the work which was the subject of the action strictly in accordance with defendant's instructions, but he (defendant) had pleaded that the charges were excessive and not according to contract. The counter-claim which he was putting forward was in respect of money which he said he had had to pay, because, owing to the defective manhole in the drive, coal merchants were unable to bring their coal right up to the house. Judgment had originally been given against defendant in default of appearance, but he afterwards obtained liberty to defend on payment of £80 into court.

In support of the plaintiffs' case, Mr. Walter James Long gave evidence of the circumstances which led up to the engagement of his firm to do the work, which he said was properly carried out in accordance with defendant's instructions. Mr. Harry Hancock, sanitary inspector for building and drainage for the Twickenham Urban District Council, said that the requirements of the council had been complied with, and he had no reason to complain of the way in which the work was done. It was, he said, in fact, first-class work. Mr. Thomas Henry Sn architect and surveyor, of No. 11 Green, Richmond, also said that the v had been properly done, and he tho the charges, having regard to the diff ties of the time, were fair and reasona

The defendant gave evidence in sup of his pleas, but in the result

The Official Referee gave judgmen the amount claimed, including the paid into court, with costs. The cou claim was dismissed with costs.

Alleged Breach of Buildi Lease Covenants

Wheeler v. Prime.

Feb. 6. Official Referee's Court.
Before Sir Francis Newbolt.

This was a case of some importanc lessees of land for building purposes, action being a claim for damages breach of covenants of the lease.

According to the statement of Pocock, appearing for Mrs. Wheeler, plaintiff, that lady was the freeho of a factory and a plot of waste adjoining at Tyler's Avenue, South on-Sea. In 1919 she leased the land Mr. Prime, the defendant, for a perio twenty-one years, the tenancy b determinable at the option of the le at the end of seven or fourteen y At the time of the letting there wa building upon the land, but there w covenant in the lease to build with certain time, but no building was t put up or alteration made without consent of the lessor. By a dee licence defendant was allowed to certain work set out in a schedule, an covenanted that he would carry out work within six months of June 24, 1 to the satisfaction of plaintiff's surv and in conformity with the local buil by-laws. The complaint was that he not done this.

The Referee: This is a twenty years' lease, and in the early part defendant does not do a certain th What damage do you allege you suffered?

Mr. Pocock said that there was dar to the reversion, and he claimed amount he would lose at the time o sale of the reversion.

The Referee said the injury to reversion would be merely nominal non-compliance within the early y In a few years before the lease exp there might be no damage at all.

Mr. Pocock said the cost of the buil would be about £400.

Mr. Melville, for defendant, said was an estimate, not of damage, bu work required to be done.

The Referee said it was really action on the second deed, the dee licence; the defendant had mad promise under seal which he had complied with.

Mr. Pocock said there was a cove that the cost of the plaintiff's surv in connection with the building, and o solicitor in preparing the neces licence, should be paid by the defen These amounted respectively to £22 3s and £22 os. 1d. The defence adm the execution of the deeds, but said

was an implied term that the work uld be subject to no difficulty being ced in the way by the local by-laws l regulations. He (counsel) did not w that any difficulty had been placed defendant's way by the local authori-s. The defendant further said he was ling to complete when the Corporation uld let him.

Mr. Melville said that the Southend rporation, although they could have pped them going on with the work, owed it to go on, although it did not in respects comply with the by-laws.

The Referee said he did not think the rporation could have stopped them hout an action, but they could give order to pull down if it did not comply h the regulations.

Mr. Pocock said it seemed that the ole case boiled itself down into the estion of the payment of the two fees, all the other defences would fall ough. As to the surveyor's fees, fendant said that they should be paid the plaintiff, and the solicitor's fees he d were excessive. There was another ion pending in the King's Bench for feiture, on the ground that defendant d parted with the lease without plain-'s consent.

Mr. Melville said, in reply to that, that intiff had accepted the rent for some e past when in full knowledge of what d been done.

The Referee, referring to the alleged mage to the reversion, said that the intiff could sell the reversion for more n she could have done when the lease s granted by reason of what defendant d done.

Mr. Melville said that originally there s nothing on the land, and now by ence a garage had been built. About o had been spent on the property.

Evidence was given on both sides, and fendant's counsel said it must be mitted that there had been a breach not completing the work in time, but intiff was claiming the full value of the rk if it had been completed in the ms of the lease. It could not be sup-sed that defendant would have left the rk uncompleted for the period of enty-one years. He argued that no mage whatever had accrued to the intiff from the defendant's failure to mplete.

The Official Referee suggested that the tion for forfeiture should be heard by n before he gave his judgment as he s in possession of all the facts, and if it nt to another judge he would have to over the whole ground again.

This suggestion, however, was not cepted, and in the result judgment was en for the plaintiff for £194 5s. 7d., of ich £150 was for damages and the lance for the solicitor's and surveyor's arges.

ousing Subsidy. Important Judgment

Colbourne and others v. Smith.

Feb. 9. Chancery Division.
Before Mr. Justice Eve.

This matter came before the Court on a nmons, and raised an interesting point to whether or not the purchaser of a use from a builder, in the circumstances the case, was entitled to the benefit of e whole of the subsidy granted by the nistry of Health, or only a certain part.

Plaintiffs urged that under the Rules of the Court it might be declared that on the true construction of a contract of May, 1920, made between the defendant and the plaintiffs, the Government subsidy which had to be applied in part payment of the purchase of a house, was £160, being the sum mentioned in the certificate of April, 1920, of the surveyor of the Swindon Borough, or in the alternative that the Government subsidy to be so applied was £180, the sum received by the plaintiffs from the Government.

Plaintiffs were builders at Swindon, and in 1920 decided to proceed with a building scheme for the erection of seventy-seven houses. Plans were approved, and a certificate issued that the amount of the subsidy for each house would be £160. Defendant entered into negotiation for the purchase of one of the houses when completed at £850, the subsidy to be taken as part payment. The completion, which was fixed for August, 1920, was delayed till March, 1921, owing to difficulties in regard to labour and materials. Plaintiffs received £180 as subsidy as the houses were not completed within a period to entitle them to £240. Later, however, the full £240 was allowed, and that sum was paid in respect of the house. Plaintiffs said under the circumstances they were only liable to bring into the account of the purchase money £160, or at the most £180. Defendant claimed that the whole sum should be brought into the account.

Mr. Howard Wright argued the case for the plaintiffs, and Mr. Adams for defendant.

His Lordship, having reviewed the facts of the case, said in his opinion the purchaser was entitled to the actual subsidy which was received. There was no allowance made by virtue of the certificate which assisted him at the time when this contract was entered into. The plans of the houses had been prepared, and when the houses were completed according to the regulations the builder was entitled to a grant of £160, reducible in certain circumstances, and not payable in others. The purchaser, if matters had so remained, would have been purchasing for £850, with the chance of getting something more, which was not to exceed £160. It was a sum to be ascertained at a future time. At the future time the Legislature, by its regulations, granted £240. Before the summons came on to be heard the sum which was received was £240, and to that amount the purchaser was entitled. He held accordingly, and ordered the builders to pay the costs of the summons.

Glasgow Public Building Improvements

A scheme is being prepared for the entire reconstruction of the internal arrangements of St. Andrew's Hall, the largest in Glasgow. An additional balcony is to be provided, and extensive alterations are to be made in connection with the lighting, heating, and ventilation. The city architect has prepared a report on the subject. The Corporation Halls Committee have also decided to complete the building of the large hall and library at the Cowper Institute, Cathcart, the walls of which were erected before the war. Tenders have been received for the various contracts, aggregating £20,000.

York and East Yorkshire Architectural Society

There was a large attendance at the annual dinner, held at York, of the York and East Yorkshire Architectural Society. Among those present were the Lord Mayor (Ald. W. H. Bird), Messrs. Paul Waterhouse, P.R.I.B.A., A. E. Munby, M.A. (president of the York Society), and Ian MacAlister (secretary of the R.I.B.A.), Messrs. Stephen Wilkinson and J. M. Dossor (vice-presidents, York Society), and Messrs. E. A. Pollard (hon. treasurer, York Society), J. E. Reid (hon. secretary, York Society), J. Ferguson, S. R. Kirby, Geo. Benson, A. B. Burleigh, S. Needham, W. E. Parkinson, T. Snowden, A. G. Stevenson, S. G. Highmoon, A. Cardman, F. Dyer, F. T. Penty, Kenneth Ward, J. Vanse, R. Jackson, and C. Leckenby. Apologies for absence were read from Mr. W. H. Brierley, Mr. L. Kitchen (ex-president, York Society), and the presidents of the Sheffield and Leeds Societies.

Mr. J. M. Dossor, in proposing "The R.I.B.A.," said that he had been a member for many years of the Institute, from which he had derived great benefit. The real aim of the Institute was to co-operate the whole of the profession into a homogeneous body.

Mr. Paul Waterhouse, in returning thanks on behalf of the Institute, referred to the late Mr. Ernest Newton, whose life, he said, had been a splendid one of service, and one of complete self-sacrifice for the profession. During the war he rendered invaluable service to the Ministry of Munitions. Mr. Waterhouse also referred to the growing unity between the Institute and the provincial societies, and paid a cordial tribute to Mr. Munby. He emphasized the fact that the touch that the Institute had with the non-metropolitan societies was a true touch. The allied societies had helped the Institute in the solution of many problems, and hence he could say that those outside London had done incalculable service. The old-time pupilage had its good points, but architectural education had been organized, and this, tempered with the pupilage system, was a valuable asset. He admired the conscientious master who told parents whether their sons could go on or not.

Mr. MacAlister, in proposing "The Allied Societies," congratulated the York Society on its choice of president, and dwelt upon Mr. Munby's knowledge and wide experience. There were, he said, forty professional societies allied to the R.I.B.A., twenty-five of these being in the United Kingdom.

Mr. Munby, in reply, said that his people had long been associated with the public work in York, and he would like to go down to fame as being the means of getting the president and secretary of the Institute down to the dinner. Visits of that kind did so much good to the provincial centres, and greatly stimulated local interest. All would like architectural education to be as broad as possible. A student should be able to tackle all problems, from designing an altar cloth to conducting an arbitration. The York Society greatly appreciated the work of the Institute and its secretary.

Mr. Stephen Wilkinson proposed "The Health of the Lord Mayor," to which the Lord Mayor responded.

R.I.B.A. Colour Competition

A sum of £200 has been placed in the hands of the President of the R.I.B.A. by an anonymous donor, for the purpose of instituting a competition for a business building, facing on an ordinary London street, in which "colour" (of a permanent nature) would be the dominant feature.

The competition will be open to all members of the profession, but it is earnestly hoped there will be a strong response by students of the architectural schools in London and elsewhere.

The accompanying diagram shows the floor lines and the centre lines of the principal doorways. These must be adhered to by competitors. It is suggested that pronounced architectural features should be confined to the entrances and the topmost story.

Competitors have a free hand as regards style and colour treatment. The ground floor might be a bank or insurance office, the remaining floors might be flats or offices. Three premiums (£100, £50, and £20) will be awarded to the best colour designs, irrespective of architectural excellence. A fourth premium of £30 will be awarded to the best architectural design. Colour must be suggested by the use of permanent material only. Designs in oil paint, fresco, sgraffito, and so on, will not be admissible.

It is suggested that competitors should aim at a broad treatment in masses rather than in disjointed detail, and should bear in mind that what might be admirable and appropriate in designing a wall-hanging could easily become vulgar and offensive when applied to a building.

With regard to the material competitors may suggest in their designs, it may be of service to them to know that a scheme for facing concrete blocks with various materials, such as marble, terra-cotta, mosaic, or copper plates, has been devised and successfully produced. It has been found that the cost of facing a building with either of these materials would be at least 25 per cent. cheaper than an ordinary stone facing. Competitors, however, are not invited to submit estimates.

The terra-cotta facing can be made in any colour, and not highly glazed. It is possible to obtain this material with a gloss like that of old Wedgwood or similar ware. The maximum size (at pre attained) is 21 in. by 15 in., in colu up to 24 in. diameter. It should be b in mind that there might be slight gularities on the face and variety in tone of colour. This would give a pla light which some designers may t desirable.

Of course marble facing can be mad much larger dimensions. Competi must suggest only such marbles as known to withstand the deleterious eff of the London atmosphere. Sample these marbles and a piece of old W wood as a sample of glazing on te cotta can be seen at the R.I.B.A. S or granite may be used at the discre of the competitor.

Designs must be prepared as ac working drawings, but shadows may cast where they would actually oc As the assessors are practical archit and painters, and not potential clie there need be (and must be) no pictures foreground. However, to give scale the building, one figure of average he will be allowed as being desirable.

Premiated designs to become the p perty of the donor. The authors ma they desire, make copies of their works.

The successful designs will be p lished.

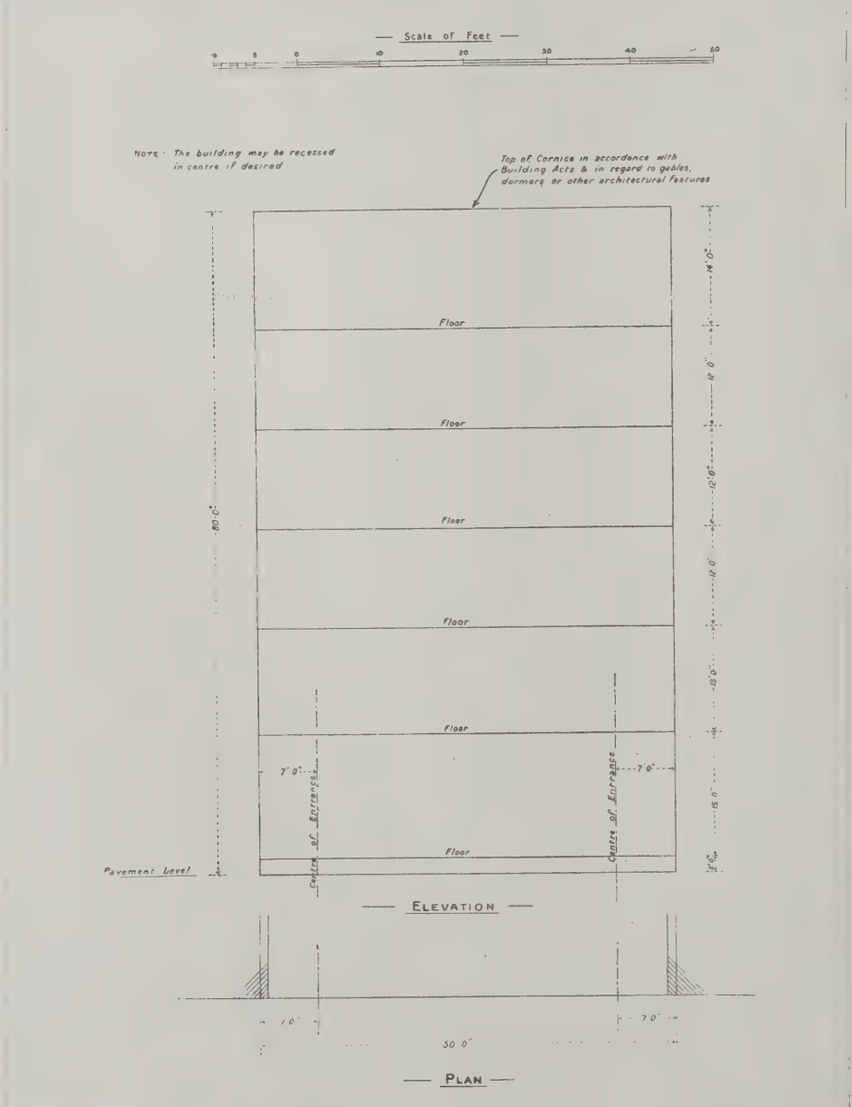
Drawings.

1. Elevation to $\frac{1}{8}$ in. scale.
2. Detail of entrance or portion of story to $\frac{1}{2}$ in. scale.
3. Section to $\frac{1}{8}$ in. scale of front w showing the depth of reveals, also depth of any recessed features.

The assessors are Sir Edwin Luty R.A.; Mr. T. E. Collcutt, PP.R.I.B Professor Gerald Moira; and Mr. Will Walcot. The designs, by the courtes the R.I.B.A., will be exhibited at 9 C duit Street, W.1, after the award been made. The Competition will conducted under the Regulations of R.I.B.A., in so far as these are applica

Each design must be accompanied a declaration signed by the compet or joint competitors, stating that design is his or their own personal w and that the drawings have been pared under his or their own supervis A successful competitor must be prepa to satisfy the assessors that he is *bona fide* author of the design he has s mitted.

No design shall bear any motto or tinguishing mark. All questions rela to the conditions must be received by Secretary, R.I.B.A., 9 Conduit Str W.1, not later than February 28, 1 Closing date, May 1, 1922.



COLOUR COMPETITION DIAGRAM.

British Industries Fai

The British Industries Fair, the eig of an unbroken series, will be held f February 27 to March 10 next. The which is organized by the Departmen Overseas Trade, will again consist of sections, one for such commodities engineering stock, hardware, and tool Birmingham, and the other for lig goods at the White City, London. two sections will be held concurrer and in both cases the exhibits will displayed under one roof, or, rat under one series of roofs, for no building is large enough to hold a c plete section of the Fair.

Coming Events

Thursday, February 16.

linburgh Architectural Association. Digressions in Stained Glass." By Oscar Paterson.

rthern Polytechnic, Holloway Road. hemical Examination of Sewage nts and Drinking Water." By Mr. . Butler, B.Sc. A.I.C., F.C.S. 7 p.m. ission on presentation of visiting

Saturday, February 18.

chitectural Association. — Spring

corporated Clerk of Works Associa- of Great Britain.—Annual dinner at orn Restaurant, London. 5.30 p.m. p.m.

Monday, February 20.

I.B.A. — "Internal Decoration of n Liners." By Mr. Arthur J. Davis, I.B.A.

Tuesday, February 21.

verpool Architectural Society. — our and Architecture." By Mr. . F. Cole, A.R.I.B.A.

Wednesday, February 22.

nchester Society of Architects.— e Classic Revival in French Painting ie Early Nineteenth Century." By essor J. Orr, M.A., B.Litt. L.ésL. is).

dustrial League and Council, Caxton —"A Proposed Solution to the sport Problem." By Mr. Roy Hor- n.

dical Officers of Schools Association, handos Street, Cavendish Square, W. he Ideal Class Room." By Mr. . Widdows, F.R.I.B.A.

Lectures on Heating and Ventilation.

At the Bartlett School of Architecture at University College a course of six lectures on the Principles of Heating and Ventilation will be delivered by Mr. Arthur H. Barker, B.A., B.Sc., Wh.Sc., on Tuesdays at 5 p.m., beginning February 21, 1922. The syllabus of the lectures is as follows: February 21—The properties of heat and air; the requirements of the human organism. February 28—The essentials of heating and ventilation; quantities of heat and air. March 7—The various methods of heating; centralized plants. March 14—The various methods of ventilation; natural and artificial. March 21—Boilers, fans, and other apparatus; boiler houses, fan chambers, and flues. March 28—Cost of installation; cost of upkeep; tests and test conditions. The course is open without fee to day students of the School of Architecture who have paid a composition fee. Fee to others, £1 1s. Application for tickets should be addressed to Mr. Walter W. Seton, M.A., D.Lit., F.S.A., Secretary, University College, London (Gower Street, W.C.1.).

R.I.B.A. Council Meeting

The following notes are from the minutes of the last Council meeting of the R.I.B.A.:—

Architects and the National Housing Scheme.—The Council have received from the Official Architects' Association and from a large number of the allied Societies communications supporting the action taken in the matter of the recent attack upon architects in connection with the National Housing Scheme.

R.I.B.A. Conference at Cardiff.—The draft programme of the conference at Cardiff on June 8–10, 1922, prepared by the Council of the South Wales Institute of Architects, was approved.

The Late Mr. Ernest Newton, R.A., Past President.—The Council passed a resolution of the deepest sympathy and condolence with the family of the late Mr. Ernest Newton.

The Concrete Institute.—Mr. E. Fiander Etchells, President of the Concrete Institute, was appointed an Advisory Member of the Board of Architectural Education.

Retired Fellowship.—Mr. Wm. Bakewell, F.R.I.B.A., was transferred to the Retired Fellowship class.

Nominations for Membership.—The nominations of six candidates for the Fellowship and eighty-eight candidates for the Associateship were approved.

Port of London Progress

Sir Joseph Broodbank read a paper on "Progress at the Port of London" at a meeting of the London Society held at the Royal Society of Arts, Adelphi. Lord Ritchie of Dundee, vice-chairman of the Port of London Authority, presided. One of the largest vessels now used in the port, said the lecturer, was the "Ceramic," of nearly 20,000 tons gross register. The new floating landing-stage which was about to be erected on the riverside adjoining Tilbury Station would be a joint venture of the Port of London Authority and the Midland Railway. Three of the largest ocean-going vessels would be able to use it at one time, and passengers would be within thirty minutes' journey of Fenchurch Street and forty minutes of St. Pancras. Sir Joseph, in conclusion, said he had little fears but great hopes for the future of the port. The lecture was illustrated by lantern slides.

WRECKAGE OF THE KNICKERBOCKER CINEMA THEATRE, WASHINGTON.

The Week's News

New Golf Course for Bognor.

Over £10,000 has been subscribed towards the new eighteen-hole golf course at Felpham, which is £2,000 short of the required amount to float the company.

Phœnician Temple Found.

Ruins of a Phœnician temple of Tanit, or Astarte, have been found on the site of the city of Carthage. The discovery was made by M. Icard.

Dublin Works Destroyed.

Messrs. Cahill and Co.'s printing works in Ormond Quay, Dublin, have been destroyed by fire. The damage is estimated at £50,000.

Mr. Andrew Young.

Mr. Andrew Young, who has died in France, was for nearly thirty years valuer to the London County Council, and in 1920 was elected President of the Surveyors' Institute.

Cheam's 600-Year-Old Cottage.

Cheam's 600-year-old cottage has been acquired by the Epsom R.D.C., who, in order to carry out an important widening scheme, will probably pull it down and re-erect it in another position.

New Municipal Offices for Islington.

Islington B.C. have decided to accept, out of forty tenders, that of their own Building and Maintenance Committee for the building of new municipal offices at a cost of £61,000.

Major H. E. Mathews.

Major H. E. Mathews, F.R.I.B.A., has been elected a member of the Corporation for Dowgate Ward, in succession to his father, Mr. J. Douglass Mathews, who retired.

Quebec Asbestos Trade.

The Government of the Province of Quebec is considering the advisability of removing the 5 per cent. royalties on asbestos when manufactured within the province and exported in a manufactured state.

Penrith Castle Park.

The memorial entrance to the Penrith Castle Park is to be built immediately, and will cost £900. It is expected that the work will be completed by the end of May.

Hospital for Sale.

The Foundling Hospital, in Guilford Street, Bloomsbury, is offered for sale by the Governors, the price asked being about £1,000,000. It is suggested that the building now offered for sale would be suitable for a museum.

Nottingham Exchange Site.

Prizes are offered for the best designs for the erection of buildings on the Exchange site, Nottingham, and the president of the Royal Institute of British Architects will be asked to nominate an adjudicator.

New Use for Hangars.

After being allowed to stand virtually unoccupied since the close of the war, the hangars at Marske-by-Sea have been acquired by Messrs. Dorman, Long & Co., iron and steel manufacturers, who intend to convert them into wagon-building sheds.

The New Building for Swan and Edgar.

The L.C.C. have rejected the plans for a new building for Swan and Edgar in Piccadilly Circus because the height of the proposed building was more than desired by the Building Acts Committee, which is now considering generally the question of the height.

£150,000 Railway Contract.

A contract in connection with the extension of the electrification of the London, Brighton, and South Coast Railway has been secured by the General Electric Company Limited, Birmingham, the contract price being between £150,000 and £180,000.

R.I.B.A. Problems in Design.

The Problems in Design submitted by candidates for the Final Examination and the Special War Examination of the R.I.B.A. are on exhibition in the Galleries of the R.I.B.A. between the hours of 10 a.m. and 5 p.m. The exhibition closes on Friday next.

New Academicians.

At a general assembly of Academicians and Associates of the Royal Academy, Mr. Henry Alfred Pegram, A.R.A., sculptor, Mr. Maurice Greiffenhagen, A.R.A., painter, and Mr. Robert Anning Bell, A.R.A., painter, have been elected Royal Academicians.

Extension of Olympia.

The directors of Olympia have decided to undertake an extension scheme. To meet the requirements of the motor industry and those of other large trade exhibitions, arrangements have been made to build a new hall on similar lines connecting the present building with an entrance in Hammersmith main road.

Scottish Academicians.

The Royal Scottish Academy in Edinburgh have elected Mr. J. Whitlaw Hamilton, A.R.S.A. (Helensburgh), and Mr. David Alinson, A.R.S.A. (Edinburgh), to fill the vacancies in the full rank of Academicians. Mr. Hamilton is a landscape painter, and Mr. Alinson specializes in both portraiture and landscapes.

London University Site.

An amendment has been carried at the London Education Committee's meeting that the London County Council press upon the Board of Education its desire that the Holland Park site for the London University be most carefully considered as an alternative to the site at Bloomsbury.

Royal Academy Exhibition.

Following are the specific dates which have been fixed by the Royal Academy for the receipt of artists' and sculptors' work: March 24, water colours, pastels, miniatures, black and white drawings, engravings and architectural drawings; March 25 and 27, oil paintings; March 28, sculpture. All works are to be delivered at the entrance in Burlington Gardens.

New Manchester Club.

The committee organizing the establishment in Manchester of a club, to be known as the Colonial and Sports Club, have secured a free option on premises at No. 44 Brazenose Street as a sit Plans have been made providing for dining-room for 120, a meeting-room f 250, with a number of bedrooms, cor mittee rooms, lounge, reading and billia rooms, to give accommodation for an thing up to 1,000 members, at a cost about £30,000.

The Building Trades Parliament.

The Building Trades Parliament he its quarterly meeting on Friday last, wi Mr. Storrs in the chair, and the repor of the Safety and Welfare Committee silicosis among stonemasons and on t draft regulations for wood-working m chinery were discussed.

The report of the Education Committ also came up for discussion, but in no ca were any very satisfactory conclusio reached. Apparently the constitution the Industrial Council itself is in t melting-pot, and until the present co fusion is cleared away it will be impossib to give due weight to any of the procee ings of that body. A detailed accou will be given in our next issue.

Modern Industrial Labour-Saving Devic

An interesting little exhibition w open in the industrial showroom Magnet House last week, when speci demonstrations were given of labou saving devices such as electric drill grinders, and polishers.

It is becoming increasingly evide that the day of heavy manual toil drawing to a close, since electrical app ances which will do the same work wi the minimum effort for the operator a rapidly reaching a state of perfection.

Among the tools exhibited by t General Electric Company are vario electric drills, including side spin machines for corner drilling. These c be applied at a distance of only 1¼ i from the wall. The drills are of differe sizes and weights, ranging from 11 l upwards, and the larger types can used as either bench or portable too Grinding attachments are also provide

A selection of electric grinders exhibited, including a type with stationa motor and flexible shaft. Polishing a buffing can also be performed with t aid of special attachments.

Prices of Materials and Labour

The prices of building materials bei no longer subject to violent fluctuatio and building trade wages having be stabilized for some time to come, t Editors of THE ARCHITECTS' JOURNA take the view that there is no longer a need to publish these tables week b week. In future, therefore, they w appear in the first issue of each mont Readers wishing to consult current pric should refer to the issue dated February

Competition Award

Seaford Recreation Ground.

The following awards have been ma in the Seaford Recreation Ground Co petition: First prize (£50), Mr. Phil Shuter, Eastbourne; second prize (£2 Mr. Stanley V. Hart, Walthamstow.

(*For List of Competitions Open see l week's issue.*)

Trade and Craft

Changes of Address.

Messrs. William Jacks & Co., metal merchants, have removed to Winchester House, Old Broad Street, London, E.C.2. New telephone numbers: London Wall 7957—7958—7959. This firm is the only one with the style of William Jacks & Co., of London, Birmingham, Liverpool, Port Talbot, Bombay, Calcutta, Karachi, Rangoon, Shanghai, and Singapore, while they are also proprietors of the business of William Colvin & Co., of Glasgow and Middlesbrough.

The British Electrical Development Association, Inc., have moved to 15 Savoy Street, Strand, W.C.2 (building of the Institution of Electrical Engineers). Telegrams: "Electreda, Rand, London." Telephone: Regent 4570.

The Institution of Heating and Ventilating Engineers have moved to more convenient offices at 38 Victoria Street, London, S.W.1., seventh floor. All communications should now be sent to that address. Telephone number cannot be stated at present.

En-Tout-Cas Hard Tennis Courts.

In our issue for February 1, page 216, we inadvertently stated that the En-Tout-Cas Co., Ltd., of Syston, near Leicester, had made 6,000 courts during the last twelve months." This should read "during the last ten or twelve years."

Gas Stoves: Reduction in Prices.

When Radiation, Ltd. (comprising six large British manufacturers of gas apparatus) was formed it announced as its policy the production of the most efficient gas appliances at the lowest possible prices. Great progress has been made in the production of new and efficient gas grates, and now comes the welcome announcement of a substantial reduction in prices.

New Joint Sales Service.

Messrs. Simplex Conduits Limited, of Garrison Lane, Birmingham, have completed arrangements for a joint sales service with their associate company, Messrs. Credenda Conduits Co., Ltd., whereby all Simplex and Credenda productions will be available throughout the branches and depots of both companies. The arrangement is essentially one of sales organization, but as such deals only with actual productions of the companies, leaving untouched the usual factored lines in which each will continue its own course of action as before, the manufacturing policy of neither company will be affected, but will remain as at present, Simplex Conduits Ltd. producing such as are included in the appended list i., and Credenda Conduits Co., Ltd., as in list ii., apart from the chief common manufacturing of conduit, conduit fittings, and wiring accessories.

i. Water-tight fittings and ironclad distribution boards, switch and fuse gear, enclosed fuses and fuse wires, colliery lighting units and industrial lighting fixtures, electric lighting fixtures and illuminated signs, malleable and grey iron castings.

ii. Domestic electric heating and cooking appliances, ships, tramway and railway carriage electric heating units, and heating elements for scientific purposes.

Telephones and Accessories.

"Ediswan Telephones and Accessories" is the title of an extremely interesting list which has been issued by the Edison Swan Electric Company, Ltd., Ponders End, Middlesex. Here is to be seen a very large range of telephones for office, domestic, and other purposes. Illustrated in several pages in the list are designs of telephones fitted with throat microphone transmitters representing the latest development in the art of telephony. During the war a need was found for a telephone outfit capable of giving satisfactory results under conditions of extreme external noises, such as were encountered on aircraft of every description, where the din created by the engine rendered it impossible to make use of any known telephone for communicating between pilot and passenger. Attempts to overcome this difficulty led to the invention of the throat microphone, which proved so successful that it was immediately adopted and used very extensively by the Air Force on aeroplanes and airships. The peculiar feature of this type of microphone is that it is insensitive to air-borne sounds, but if placed against the side of the throat whilst a person is talking, the speech is clearly transmitted, unaffected by any external noises such as are caused by running machinery, etc. Apart from military purposes, this type of microphone is invaluable for use in any position where external noises are prevalent, such as noisy machine shops, stamping mills, shipbuilding yards, etc. Every conceivable accessory of the most up-to-date patterns is shown, together with some useful diagrams of connections.

English Alabaster Lighting Ware.

The semi-indirect system of lighting, with its soft diffusion and barely perceptible shadows, is becoming more and more generally adopted. Bowls of the finest English alabaster, richly marked, are illustrated in a new leaflet, No. F.2694, recently issued by the General Electric Company, Ltd. The carving is perfect in execution and is carried out in various styles, so that designs can be selected to harmonize with any type of architecture or decoration. We understand that a very complete range of alabaster and other fittings is always on view in the spacious showrooms on the lower ground floor at Magnet House, Kingsway, and at the company's branches, from which copies of the leaflet can be obtained on request.

Telephones.

The Telephone Manufacturing Company, Ltd., have sent us particulars of their various telephonic specialities, all of which are specially designed and installed to suit the peculiar organizing requirements of the customer. The company cater for the needs of all and sundry —shipyard, office, ship, warehouse, or private house—and for each class of work pin their faith to one standard model. The company are closely associated with a number of installing companies spread over the whole of the United Kingdom and allied countries, thus ensuring that all telephones manufactured by them are installed with "an all-time guarantee of efficient working, together with free maintenance, repairs and renewals necessary as a result of ordinary wear and tear."

The firm's inter-communicating telephones include such special circuit arrangements as the following: (1) "Round-call" signalling and speaking; (2) Central or selective "secret-key" control; (3) Visual indicators on the master instrument showing at a glance which of the telephones on the system are "engaged" in conversation. The "round-call" system enables any person to get any other person in the building—irrespective of his locality—in a moment, without the necessity of trying over every button on the instrument and asking "Is Mr. So-and-So there?" The centre or selective "secret-key" control enables any of the principals, at will, to isolate their line from the rest of the system for the purpose of holding *confidential* conversation with principal members of their executive.

Another ingenious speciality is the new system secret service auto line finder and indicating inter-communicating telephone. As its title implies, it is a "secret" telephone, entirely free from third-party interruption and inductive cross-talk. Its functions are automatically controlled and fool-proof. Another "utility" novelty is the "laryngaphone," with its many possible adaptations. The principle of the "laryngaphone" is the direct transmission of spoken messages unaffected by extraneous noises.

One of the firm's self-contained central electrical or "energy" units, consisting of a direct-coupled motor-generator, accumulator, and power panel, was specially adapted by the C.A.V. Company, and generally employed on all the larger telephone installations supplied by the Telephone Manufacturing Company. The head office of the company is Hollingsworth Works, Martell Road, West Dulwich, London, S.E. 21.

Hornsby-Stockport Gas Engines.

Messrs. Ruston and Hornsby, Ltd., have just issued a new catalogue, No. 4213, which fully describes and illustrates the Hornsby-Stockport gas engine and gas producers. In the design of this engine real simplicity has been aimed at, combined with facility for taking apart for cleaning and adjusting. Except the actual valves themselves, all parts are *visible and removable* without taking the engine to pieces. It is also claimed that adjustments are easily carried out by an intelligent workman; that constant attention or regulation is not required; and that *skilled labour is not necessary*. Great attention has been paid to consumption, mechanical efficiency, and steadiness in running. The outstanding points claimed for the suction producer are—simplicity of design, ease in handling, certainty in action, regularity in quality of gas produced, and economy in fuel. Messrs. Ruston and Hornsby, Ltd., are contractors to the Government and are on Admiralty and India Office lists. The London office is at 46 Queen Victoria Street, E.C.4, and the company's works are at Lincoln, Grantham, and Stockport. Copies of the catalogue may be obtained on application to the company.

British Columbian Timber

A lecture on "The Timbers of British Columbia" has been given by Mr. William Turnbull, Timber Commissioner for the Government of British Columbia, before the Royal Society of Arts (Dominions and Colonies Section). Lord Clinton, Forestry Commissioner, presided. Mr. Turnbull said that the huge stands of coniferous woods along the coast line and in the interior were at present the greatest asset of the province, and the Government obtained a revenue of over $3,000,000 (over £600,000) annually from them. Their Forest Service, started in 1912, had been reorganized since the war. Eighty per cent. of their energy and expenditure was devoted to protection against fire. Their overseas trade had grown from 43,000,000 ft. in 1916 to 170,000,000 ft. in 1921. Of this latter quantity Japan and China took 93,000,000 ft. and the United Kingdom 9,000,000 ft. In their pulp and paper industry production had grown from practically nothing in 1912 to an output of 136,832 tons of newspaper, 9,792 tons of wrapping, 5,300 tons of sulphite, and 9,000 tons of sulphate pulp in 1920.

Goods by Rail

Railway companies of Great Britain have agreed to important modifications of the general regulations affecting the addressing of goods. The existing regulations provide that labels or tallies, giving the name and address of the consignee or a distinguishing mark, shall be fastened to articles or packages, or, in the case of metal, bars, &c., painted or stencilled on the articles. From Sunday last the following traffics will for the present be exempt from these regulations :—

Returned empties when branded with the owner's name and address.

Any general merchandise of the same or similar description carried in consignments of one ton or upwards to the same consignee necessitating the exclusive use of a wagon, instead of two tons and upwards as formerly.

Articles or packages of precisely the same size, description, and quality in consignments of two tons and upwards from the same sender, for one destination station for two or more consignees. (This is a new regulation, and is designed to meet the definite needs of traders.)

Export and import goods conveyed in through trucks direct to ships, and vice versa.

The exemptions are not applicable to explosives, inflammable liquids, or certain dangerous goods.

Latest List of New Inventions

Latest Patent Applications.

2297.—Crittall Manufacturing Co., Ltd. —Panelling. January 25.

2425.—Logan, E. J.—Centering for floors, ceilings, &c. January 26.

2564.—Palmer, E. T. — Suspended scaffold. January 27.

2615.—Pearson Bros. and Campbell, Ltd.—Concrete, &c., floors, &c. January 28.

Specifications Published.

173862.—Williams, E. O.—Construction of reinforced concrete floors, decking, and the like.

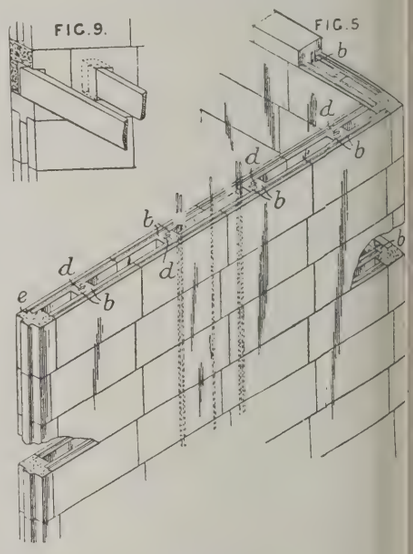
173870.—Lichtenberg, F., and McCarthy, M.—Building-slabs and structures formed of the same.

173876.—Morgan, J.—Walls.

173965.—Dalhoff, W. G., and Lunn, W. K. —Manufacture of a material consisting of moler, infusoria earth, and the like, and suitable for the manufacture of light concrete.

Abstract Published.

172800.—Walls.—Locan, T. A., 323 High Holborn, London. — Double walls, with or without concrete filling, are formed, as shown in Fig. 5, of blocks or slabs having on the inner face a central rib *b*; the ribs contact side by side and with the opposite block. Metal ties *d* may also be used. Jamb blocks *e* for the openings are rabbeted to receive one wall block, and the sill, lintel, and corner blocks have a mid-rib to fit the interior space of the wall.



The joists rest on a course o sill blocks, and their ends ma engage in apertured blocks Fig. 9, or they may be wrappe in corrugated paper and b embedded in concrete.

The above particulars are specially prepared b Messrs. Rayner & Co., Registered Patent Agents, 5 Chancery Lane, London, from whom readers of th Journal may obtain all information free relating t patents, trade-marks, and designs. Messrs. Rayner & C will obtain printed copies of the published specificatio and forward on post free for the official price of 1/- eac

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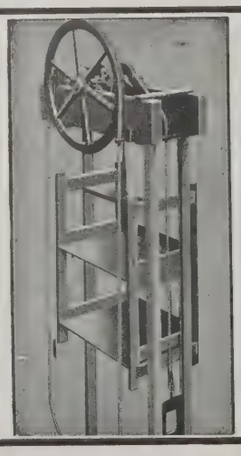

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THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

A SHOP IN THE MARKET PLACE, BOSTON, LINCS.

27-29 Tothill Street, Westminster, S.W.1.

Drawings of Architecture. 4.—A Polish Church

From a Drawing by S. Noakowski

The above drawing is another treasure of Professor Noakowski's art, upon which there was an article in this JOURNAL a fortnight ago. He is a fascinating draughtsman, and one from whom English architects can learn a good deal in the matter of broad handling combined with precision of draughtsmanship. He displays here a keen interest in the wall surfaces, a nice appreciation of their thickness and solidity, and an appetite for simple forms which is engaging because utterly unartificial. Each line is convincing because it is so obviously the instinctive expression of a thought.

THE
ARCHITECTS' JOURNAL
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nesday, February 22, 1922 Volume LV. No. 1416

The Commercial Ideal" and the Architect

HE paper on "The Commercial Ideal," read a short time back by Mr. H. Bulkeley Creswell at a meeting of the Architectural Association, should not be lightly dismissed. Mr. Creswell d certain important issues that demand closer con- ation than they have yet received. We feel compelled averse some of his chief contentions, for we fear that create an utterly erroneous impression concerning the al attitude of the architect towards the commercial

is certain, however, that Mr. Creswell did not succeed pressing his views to his own satisfaction; and we l wish them to be rather different from what the ts of his lecture seem to convey. In replying to the ssion on his paper, he said, somewhat pathetically, "he felt as if no one in the room had understood him." tragical misunderstanding arose, we think, from what s to us the palpable fact that, all the time, Mr. Creswell ngaged either in knocking lustily at an open door, or gging a figment. The kind of commercialism that he mned has little substantial existence to-day. Charles ns dealt with it and killed it when he wrote "Hard s," and created such sordid-minded men of business as radgrind and Mr. Bounderby: antiquated and obsolete of the mid-Victorian era.

-day, thanks in no small degree to Dickens, it is not sary to pillory the commercial ideal. Commercialism nce exactly what Mr. Creswell describes. To-day it ake its place proudly as a constructive power instead destructive one. But it is possible that Mr. Creswell fusing one day with another. Surely what he must had in mind was not commerce but sheer commer- n of the bad old sort when he said: "Now, the com- al ideal is subversive of all that gives dignity to nd of nearly all that makes life worth living; it is in antagonism to the spirit which has endowed civiliza- with the glories of Art, Science, and Letters," and so in a long passage which would be magnificent if it d out into some broad truth.

ere Mr. Creswell regrettably errs, we believe, is in ng his theme in such a manner that the growing zeal e Fine Arts, which, looked at rightly, is one of the promising features of modern business life, is mis- ued lamentably and dangerously. In particular his appear to discourage support from the Fine Arts for ing that may be considered commercial, and at the time he misrepresents modern commercial ideals, and almost a stigma upon professions which lend their commerce. The subject was a difficult one, as he ealing with an abstract matter, and we wish he could found it possible to define more clearly the theories evidently had at heart.

ur view, and in that of most professional men who into contact with business life and ideals as lived and sed to-day, modern commercial ideals are by no to be despised. They are much higher than Mr. ell seems to imply.. And the reason for the change has resulted in the raising of commercial ideals is found in the fact that a different type of man has d business life.

of cultivated minds and high ideals, developed, often, by a university education, or by travel where the treasures of art are gathered, are to-day directing the policy and aspirations of the modern business world. Such men do not cherish their ideals solely as a means of pecuniary profit; they realize that these have an independent, an essential virtue of their own, and they appreciate their intrinsic value. Business men of past generations learnt to believe and to practice the old saw that "honesty is the best policy," but the modern business man has advanced so that he loves honesty for its own sake; and when he regards good architecture and good decoration as good business policy, it does not follow that he does not also love good architecture and good decoration for their own sake.

Mr. Creswell rightly spurns beneath his feet the low ground sometimes taken in recommending that good architecture is good business. But the advocate of good architecture stands the better chance of making converts for he advances arguments that a practical man can understand. The point is to get the good architecture, not to be finicky about the method of getting it.

To realize that it is to art alone that commerce must look to create the atmosphere that shall express the enlightened ideals which have developed is admirable and praiseworthy. To be determined to sell only those goods that embody in their composition the evidences of veracity of thought and action—honest goods—and to seek, as a logical corollary, to secure the appropriate housing that shall reflect the high ideals that shape a business policy is to carry out in the most realistic manner the essence of the teaching of art.

"Satisfaction" is the watchword of modern business life. It is the ideal of commerce that all who come into a place of business shall experience that feeling of Satisfaction and contentment to which beautiful and well-conceived architecture, and harmonious furniture and decoration, can alone conduce. The enlightened business man knows that appropriate environment cannot fail to enhance the satisfaction which honest dealing produces; whereas bad architecture and decoration, inharmonious surroundings, impolite manners, and all greed and one-sided self-seeking must at once thwart the ideals that his mind has conceived and that his whole organization is designed to create—staff, building, window-dressing, and even minor details—all being ordained for the same object—to express willingness of service, honesty of purpose, and integrity of action. The product of the whole conception means satisfaction, which shall be truly earned and truly given.

We are convinced that this benign spirit is operating more and more strongly in all our best business concerns; and we feel that, so far from saying a single word that would seem to discourage business men in the manifestation of this spirit, we should do all in our power to assist this very conspicuous movement which is elevating business ideals.

For it is within the province and the power of Art to raise to fine issues every ideal on which its influence is brought to bear; and Mr. Creswell may rest assured that the commercial ideal is rapidly merging in the humane ideal, for what other general significance can be attached to the lectures, concerts, sports clubs, canteens, and other social elements in the Welfare Work that has so firmly taken its place among Commercial Ideals?

Notes and Comments

Announcing Results of Competitions

COMPETITIONS naturally foster a combative spirit. Always they provoke murmurings, whether at the conditions or at the results, or, it may be, at incidental occurrences. In fact, to anybody who has a gift that way, the occasions for "grousing" (we borrow the word from a correspondent who evidently owes some forcible items of his education to experience with the army) are innumerable and of all degrees of magnitude. It is seldom the assessor who is openly blamed; wherein he differs markedly from the referee at a football-match, who otherwise would seem to possess certain points of functional resemblance to him. This similarity must have been present to the mind of the correspondent who last week asked "*Why should* the assessor go home after he has made his selection?" Is not this akin to the sardonic inquiry of the crowd whose favourites have lost the football match? Why should the referee be allowed to make good his escape! Our correspondent's intention, however, is purely pacific. He contends, quite rightly, that the assessor's task ought not to be considered complete until he had in courtesy made sure that the losers were apprised of the names of the winners. We quite agree that the participants in a competition should know who has won it; but we are rather disposed to think that the assessor has finished when he has found the winners. Announcing their names to the unsuccessful candidates is routine clerical work that devolves on the promoters of the competition. Still, the assessor might make it clear to the promoters that they are under an obligation of courtesy to competitors to inform them of the full results of the competition. Merely to intimate to a competitor that he has been unsuccessful is a very rude way of breaking the news. There is no need to say who has been unsuccessful. That disagreeable item of information is only too easily inferred negatively from a list of the winners, and there is no need to rub it in by expressing it in direct and positive terms. That is to rub salt into the wound: it only irritates without healing. Will not the Institute take steps to secure the observance of this small point in etiquette?

The Axe and the Taxes

A staggering feature of the much-discussed Geddes Report is the curious recommendation with regard to housing. It is calculated that the average cost of each house built under the moribund national scheme is probably £1,100. This, according to the Geddes report, implies an annual charge of £75, towards which the net rent provides £16, and the proceeds of a penny rate £4, leaving £55 a house to come out of the rates every year. Imagine the case of a local authority responsible for, say, a thousand houses on these terms! It is terrible to think what would happen to the official who attempted to collect the rate based on this substantial item. He would hardly survive the first round. But, this appalling liability having been incurred, what is to be done? Reduce the burden, says the Geddes report, by selling the houses half-price: that would effect a net saving of £21 10s. per annum on each house sold. "Net saving" is a distinctly ironical phrase, for, apparently, the luckless ratepayers would be amerced in £33 10s. a year on each house sold! In the case supposed of a local authority holding a thousand houses, and fortunate enough(!) to sell them at half what they gave for them, the "saving" effected would leave the ratepayers saddled with a rateable item of twenty thousand pounds and more a year, with the debt as the only asset! Multiply these savings a little, and the State will soon have "saved" enough to go bankrupt. We seem to be living in the Land of Topsy-turvydom, whither we have been brought by State dabbling in housing adventures, and by State interference with building generally. As Mr. E. R. Bentham, who has acted as a district inspector of housing in several counties, has well put the case: Builders had, in the ea days, "to be approached with the ideal plan, ideal spe fication, and ideal requirements as to quantities a costing, and naturally they responded with ideal price It is a hard saying, but we fear that there is only too mu truth in it. The axe, like that of which Raleigh felt edge, is "a sharp medicine, but it will cure" many i If it will indeed lighten the burden under which the t payer groans and sweats, he will be much more free to bu

Architects' Certificates

Was it not Byron who sang "The form, the form al is eloquent"? It is so in a wider sense than he may h imagined. There is, for example, the architect's certific form. Hitherto it has been non-existent, or, rather, the for it has taken have been Protean; the architect, unless were an exceptionally methodical man liking to do thi decently and in order, writing out the builder's certific on any old scrap of paper that happened to be at ha That sort of certificate was, and is, certainly very eloqu It attests, in more or less legible handwriting, that contractor is entitled to a certain sum of money on acco of work done. It certifies, silently, but with no less quence, whether the architect has much or but little reg for system and for tidiness. Ordinarily the insouci architect solves the formidable problem of whence paper should come and what should be its shape size by the simple but slovenly expedient of tearing a p out of his pocket-book; from which action the most dan ing inferences are inferred by the contractor who pres the certificate and, what is worse, by the client who rece it and is half-inclined to repudiate it and its author bec of its dejected and makeshift appearance. The R.I.B has come to the rescue. It has issued a Certificate Book the use of architects. It is plain but neat in design, practical as to the wording, which is calculated to give architect the least possible trouble in filling in the bla Appended to it is a smaller form of receipt for the tractors to fill; and so we get that uniformity in size style which is indispensable to tidiness in filing or stor By the way, it might have been possible to place R.I.B.A. seal in a rather more happy position.

The Rome Scholarship Competition

As a matter of simple arithmetic it is eight chance one that the Rome Scholarship in Architecture will year again be captured by a student of the Liverpool Sc of Architecture. This is not prophecy, and does not amount to "intelligent anticipation." It is plain obvious inference from ascertained fact. In the liminary or "weeding-out" competition, ten candid may be selected to take part in the final or deciding petition to be held in April or May. This year nine been chosen to undergo the final test, and of these there was only one—a Manchester student—who hac been trained at the Liverpool University School of Ar tecture. Yet there were candidates from London from Overseas. Of course, our opening remark a "eight chances to one" will not bear strict analysis. final decision can owe but little to chance, although element is popularly supposed to be present in great less degree in most human affairs. The losers in contests are always at liberty to extract as much cor tion as they can from that pseudo-philosophical reflec but it is, nevertheless, fairly certain that on the av the best work wins, whether it comes from Live Manchester, or elsewhere. Professor Reilly is therefo more cordially to be congratulated on the continuou extraordinary success of pupils from his school. Bu final competition for this British Prix de Rome have been much more interesting if it had excite hopes and stimulated the ambitions of as many dif architectural schools as there were candidates chosen.

Preliminary Competition for the Rome Prize

A Criticism of Work Submitted

A ROAD by the lake, an upward slope some 200 ft. in length, a background of dense trees broadening at this place in a great arc of a 240 ft. radius—the scene is laid for the waterside café and tea-house. r hundred and fifty people forming fours at little tables, l se exact dimensions, though told me, I have forgot, fill main hall. A quarter of the size of it is, first, a tea- n, and then a—bar—O vulgar word, a whisky and fountain. The necessary services, toilettes, and rooms he manager and the caretaker must be included.

hrice blessed programme, falling, as I read the words, compositions marvellously fine—but stay! "the proach must sweep clear of the front, that it may not rrupt the lawns." O cruel examiners! I am undone. my pretty palaces falling into dust; Inspiration, like a Naiad, glimpsed for a moment in the sunlight, fled e close darkness of the cypress grove. Nothing is left e—nothing but the mocking laugh of the Satyr.

thicket was never so thick but what there was a way of it; so take this in front or that at the side—'tis the l's choice when there are thorns in both of them.

he building will be parallel to the lake, and, the case g what it is, there are but two ways of coming at it. ier we march in boldly at the end, or we creep in from sides under cover of a terrace, and launch our attack he central mass. If the first course be adopted the r can be on the axis of the main hall, which slides the nt of Bacchus forwards—the tea-room follows, at the r end, to keep it company; and by both coming out so rninently they spoil the view of lake and lawn for the -outs of the main body. If they be brought back again foyer feels the squeezing, sulks in a corner, and will not omforted. And to these troubles is added the remote- of the tea-room. In the second case, creeping, as esaid, by arid galleries, saps, and tunnels, to some tegic point, and so springing up at the very scene of n, it cannot be said that a round tour of the vaults and ts is the best prelude to a gay feast in a gay hall, a le crumpet in the tea-room, or a *** at the other end. casings of the stairways keep out some sights of the hern view, but the burrowing to an ascent on the north prolongs the agony of the underworld.

'as ever mortal man so pressed and harassed? Pride e foyer ends with weeping in the tea-room; or I'm lost veen a Full House and a Straight Flush; and, O Irony ate, I can't be happy up above unless I'm miserable w!—Dear Sirs! In cases of this nature there is but infallible cure, used—I assure you—by the greatest . Put all the runners in a hat, shuffle them well, and— don, Sirs, I had forgot you had done it before.

was a hard sowing, but blooms a good crop. But here es the critic to pluck out the tares from the wheat.

ne of the most important assets in a public building of kind is an efficient means of getting people in. This e proprietor's—your client's—point of view. By-laws concerned with getting people out. Yet I find in all selected designs, except in Nos. 57, 67, a constriction ngress or egress, vertical or horizontal, which would nuch to keep the café empty, bring bankruptcy on the moters, and the local council on the architect. There o proportion for ways in and out but what is given by number of those using them. And if it is a case of me into my parlour," why, the bigger the web the more flies. Simple communications in the restaurant as terrupted as the lawns outside it, would lessen the den of control, and like a perfect soap (if we may believe tt is said of it) lighten labour, save work, stay time— even "make the house bright and beautiful." The ting off of the axis in its early pride, before it has had time to develop its full power and beauty, is an architectural shortcoming I must record against Nos. 64, 65, 66. In each case the planning would have given an attractive composition of three rooms, joined by pleasant links—I prefer to call them pauses, where we may prepare for fresh delights—had promised indeed to do so, when some impertinent servery or misplaced stairway suddenly breaks off the assurance. Design No. 55 shows, in the joining of the main hall to the tea-room, and its companion on the other side, an unhappy sidetracking of a natural axis. "May I be spared," cried I, "I have broke an axis, as clean as a whistle?" "O, La!" said My Mistress Art, "I'll learn you." And she did. The breaking of a principal axis will ever lead to a complementary disaster. The rigid maintenance of these leading lines of the plan form will naturally result in a simple expression of its parts in the elevations. There will be no mean pantries masquerading as stout towers, or humble kitchens flaunting it as rooms of state. Not that these designs halt much in that way, for the elevations grow up naturally enough and tell plain what's inside of them for all the world to see. And a gay troupe they are, with Spanish Baroque high in the general favour. They well show that frivolity of purpose is not incompatible with good design. How little gaudiness has to do with gaiety is shown by the barbaric blinds and blue trees with which No. 62 mars an else chaste design. The elevations of No. 64 present a sound composition with—may I say it—a "punch"; but I would not go there. No, I should feel more sprightly on the road. Suitability to a purpose may be had without a sacrifice of real ideals. The south front of No. 57 is an imaginative work set forth with as much grace as No. 59 is obscured by heaviness.

And so I totter on the brink of that never-ending argument on the proper methods of drawing architecture—and in I fall straightway. The display of colour in the room where these drawings are hung is so brilliant that many people are drawn aside to gaze thereon. But it is a cheap triumph, and poor sport catching fools. The wise are not deceived. The object of architectural rendering is to show off the design, not to obscure the lack of it. Not, My Dear Sirs, that I would suggest you have done this wicked thing, but I see that were some plans stripped of their trappings, robbed of their coloured inks, deprived of their spots and patches, and all their trees eradicated, they would present but poor faces to the world, as many a king, were he shorn of his robes and rich purple, and held up, willy-nilly, in a bare shift, would disappoint his subjects sadly. True, a good plan would be as good though caparisoned as the rainbow, but I would think no more of it for that. Gilding the daffodil is an ideal game, and self-deception creeps up unawares. A knowledge of building and a sincerity of purpose are the two things needful for the good drawing of architecture. So stop spraying that forest. I declare I am quite lost under the shower—come back to duty—aye, Death and Dereliction, for on the Café services I would say a word.

Such a clutter I never saw, Here a larder, there a pantry, stairs up, stairs down, kitchen dwindled into nothingness. Oh, Sir, what a bustle! What a labour there would be! A restaurant kitchen is either an economical proposition or a failure. Its motto is the greatest effect for the least labour. Its discipline is as rigid as a battleship's, and a misplaced pasty may destroy the task of ages. The work must go forward—literally forward, from the receiving and checking of goods, to the issuing of them, the preparing of them, to the cooking and the serving of them, and out of the kitchen to the very eating of them. In how many of these services here would chaos not reign; even if the critic himself were boiled up in his own juice and left to simmer for his pains!

But come, this is no proper conduct, for a critic to go pricking and curvetting among the selected. 'Tis time to gallop off, say I, lest I make a fall. And you, Unselected Ones, take your work, and bury it in a deep grave. It will spring up a bed of Lilies. J. B.

The works submitted in the open competitions for the Rome Scholarships in Architecture, Sculpture, Decorative Painting, and Engraving, are now on exhibition at Burlington House, together with works executed in the Final competitions for the scholarships in 1921.

The subject for this year's Open Examination in Architecture was A Lake-Side Restaurant in a Public Park. Time allowed, twelve hours *en loge* for sketch design and thirty days for completion of drawings.

Designs by the following candidates are now on view (those selected for the Final are indicated by an asterisk):—

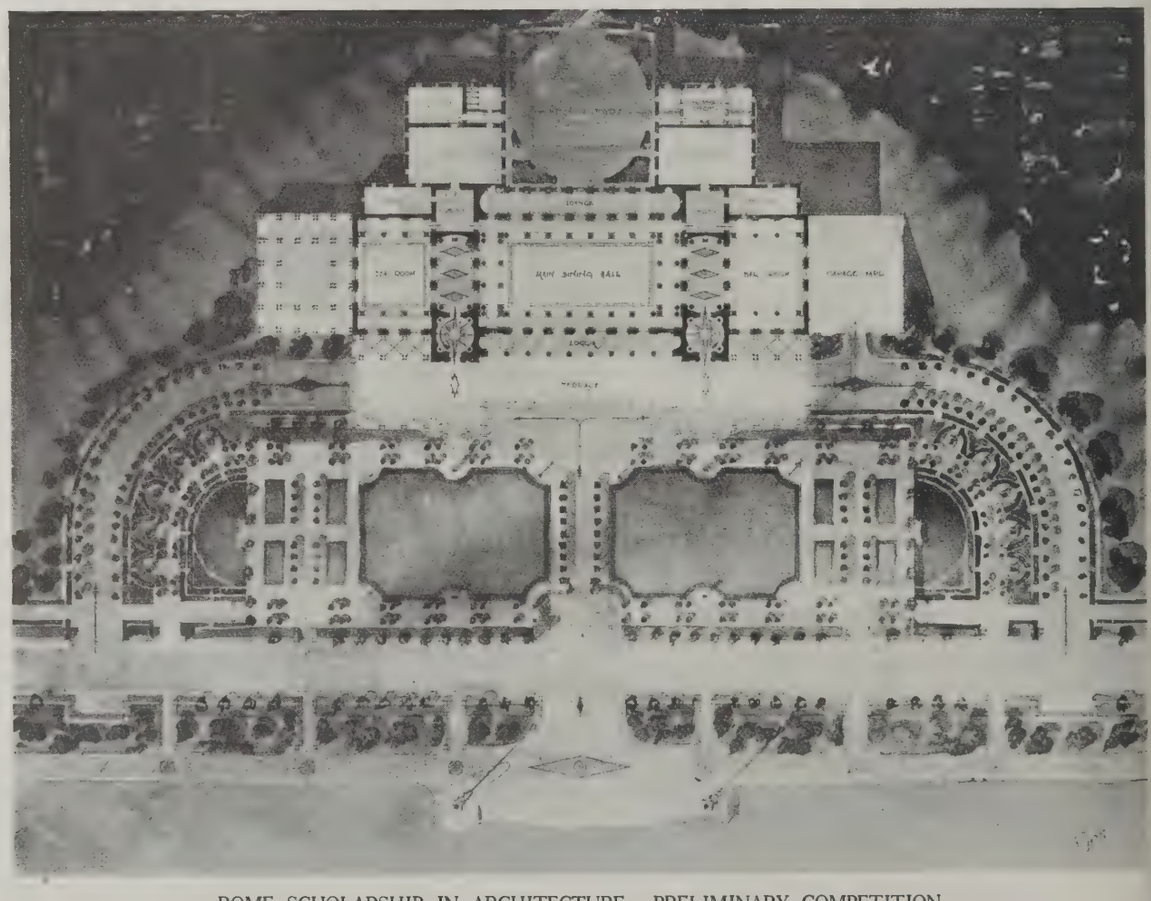
*55. H. E. Hamilton Higham (Liverpool University).
56. Walter A. Devereux (Queensland Architectural Association).
*57. Edward W. Martin (Liverpool University).
58. Harold Conolly (Leeds School of Art).
*59. Edwin Williams (Liverpool University).
*60. George Checkley (New Zealand and Liverpool University).
61. Donald Brooke (Liverpool University).
*62. Eric Ross Arthur (New Zealand and Liverpool University).
63. John H. Forshaw (Liverpool University).
*64. Reginald A. Cordingley (University of Manchester).
*65. Wilfrid B. Edwards (Liverpool University).
*66. Wesley Dougill (Liverpool University).
*67. Stephen Welsh (Glasgow School of Architecture and Liverpool University).
68. William J. H. Gregory (Liverpool University).

The British School at Rome was founded in 1901 for t benefit of British students pursuing serious studies in Ital It was reorganized and incorporated by Royal Charter 1912. The general management of the School is in t hands of a Council and an Executive Committee, and i technical work is supervised by Faculties representi (1) Archæology, History, and Letters, (2) Architectu (3) Painting, (4) Sculpture, and (5) Engraving. The School not a teaching institution, but a centre for advanced stu and research, the students admitted to the School carryi out a course of study advised by the Faculties.

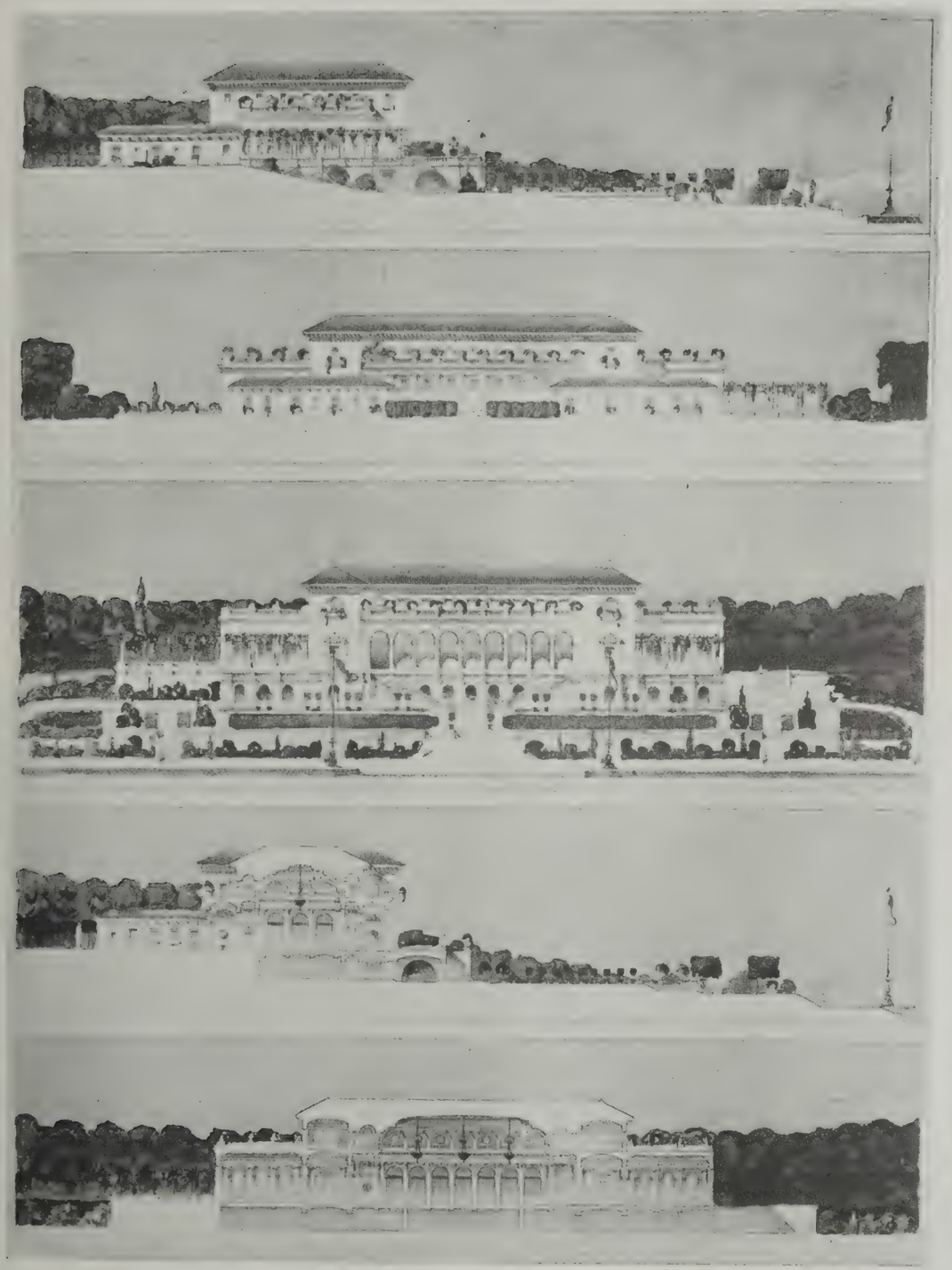
The art scholars, in addition to being allowed the free u of studios and the fine library formed by the Archæologic Faculty, are provided with quarters in the school hos at very moderate cost, while every facility is accorded th to travel in Italy and other countries. The Faculties Art administer the Rome Scholarships in Architectu Sculpture, and Decorative Painting offered annually by t Commissioners of 1851 and also the Rome Scholarship Engraving—endowed by an anonymous benefactor. The scholarships, which are open to British subjects, are of t annual value of £250 and are tenable for three years. T Faculty of Architecture also administers the Henry Jar Studentship offered for annual competition by the R.I.B. It is open to students and Associates of the R.I.B.A., a is of the value of £250 per annum and tenable for t years at the British School at Rome.

All particulars regarding the School and the Scholarshi offered may be obtained from the Hon. General Secreta British School at Rome, 1 Lowther Gardens, Exhibiti Road, London, S.W.7.

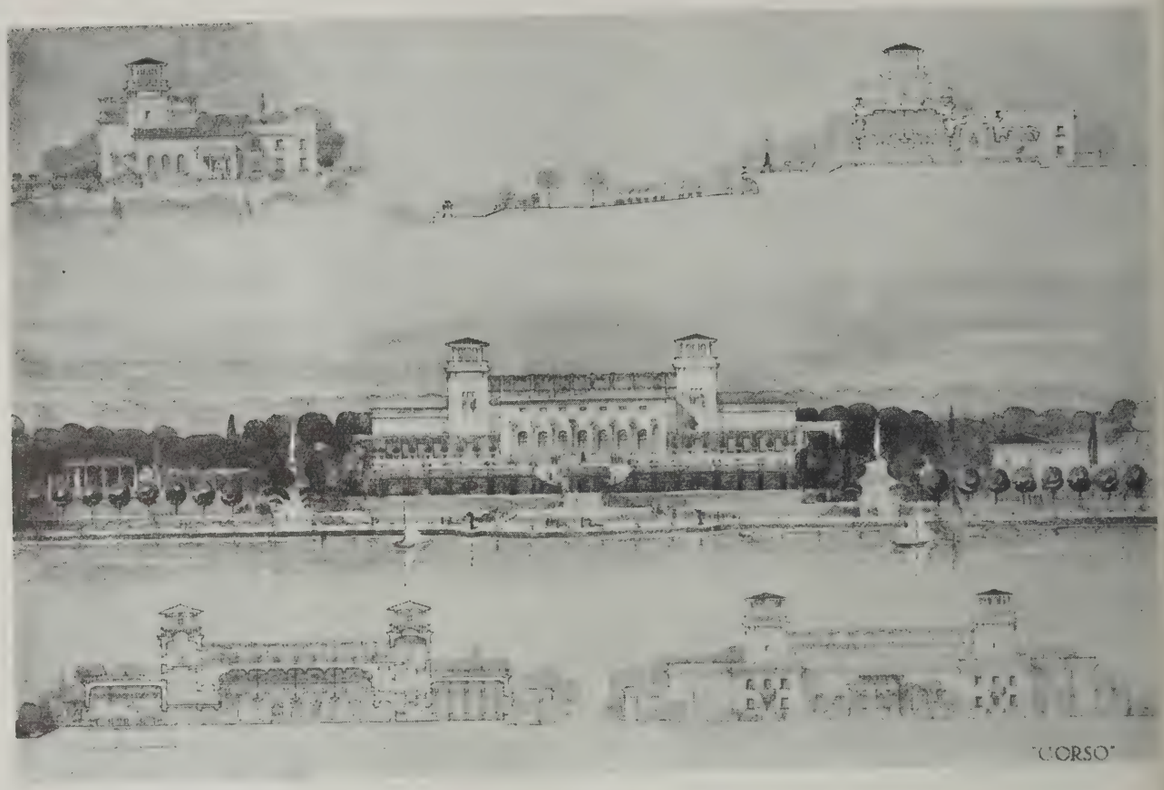
The present members of the Faculty of Architecture ar Sir Reginald Blomfield, Mr. H. Chalton Bradshaw, Sir Jo Burnet, Mr. W. Curtis Green, Sir Edwin Lutyens, Profes C. H. Reilly, Mr. G. Gilbert Scott, Mr. John W. Simps Sir Aston Webb.

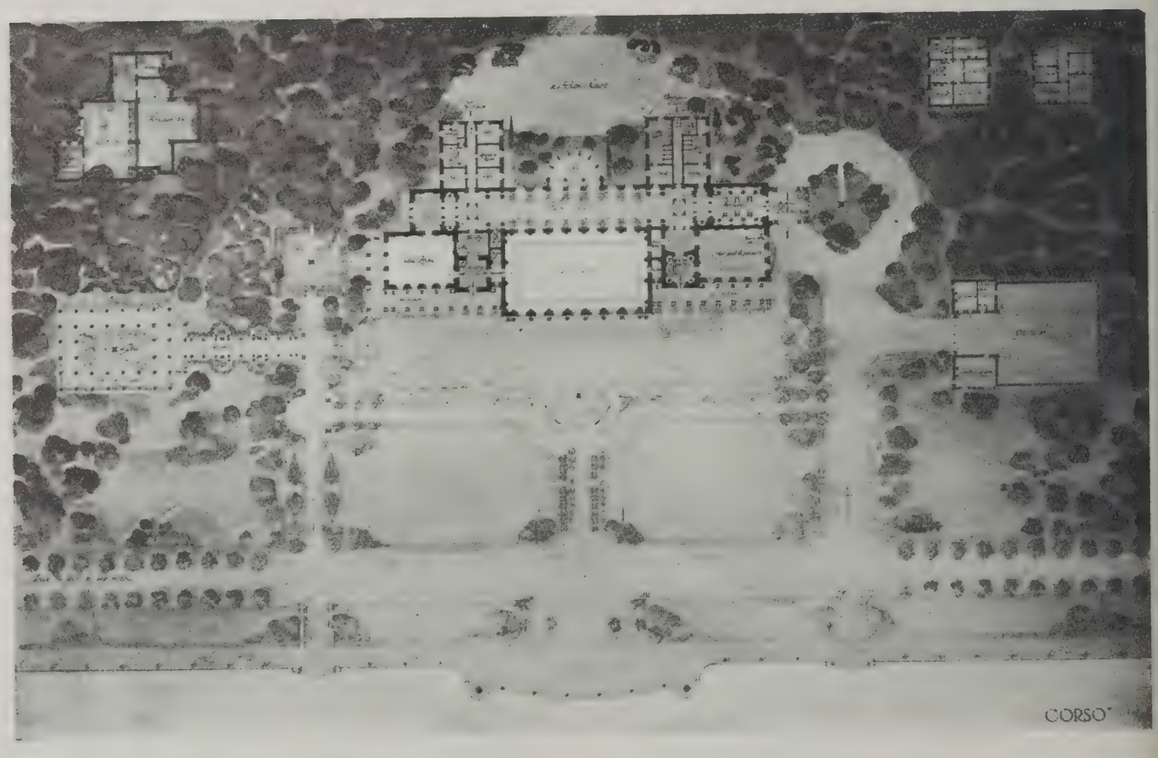


ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY EDWIN WILLIAMS (LIVERPOOL UNIVERSITY).

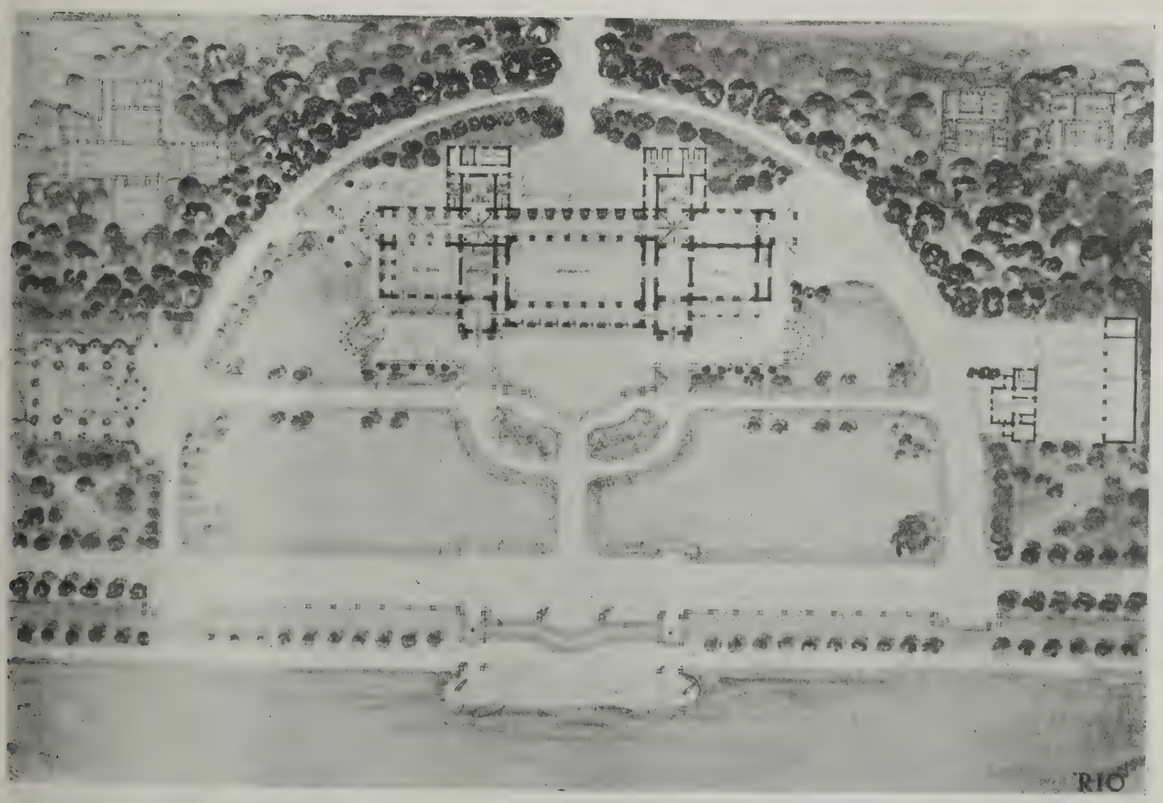


ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY EDWIN WILLIAMS (LIVERPOOL UNIVERSITY)

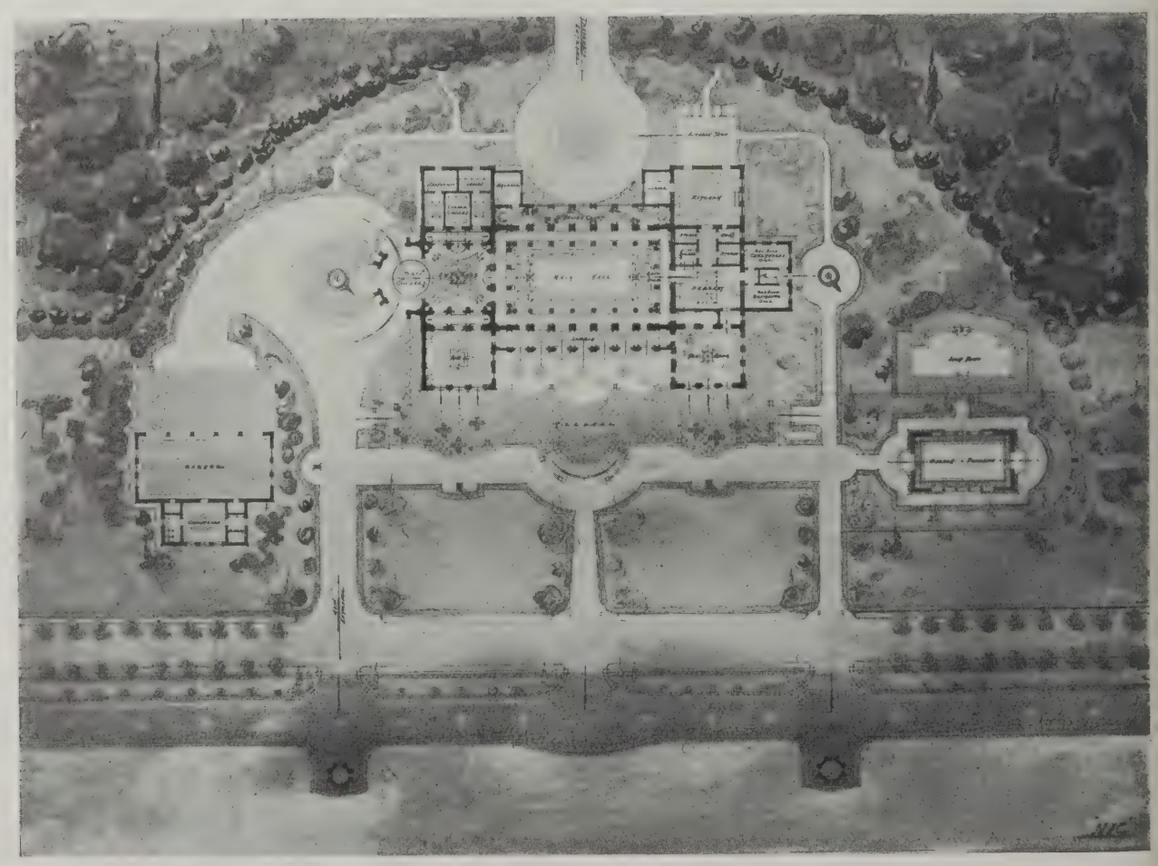




ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY WESLEY DOUGILL (LIVERPOOL UNIVERSITY).



ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY GEORGE CHECKLEY (NEW ZEALAND AND LIVERPOOL UNIVERSITY).



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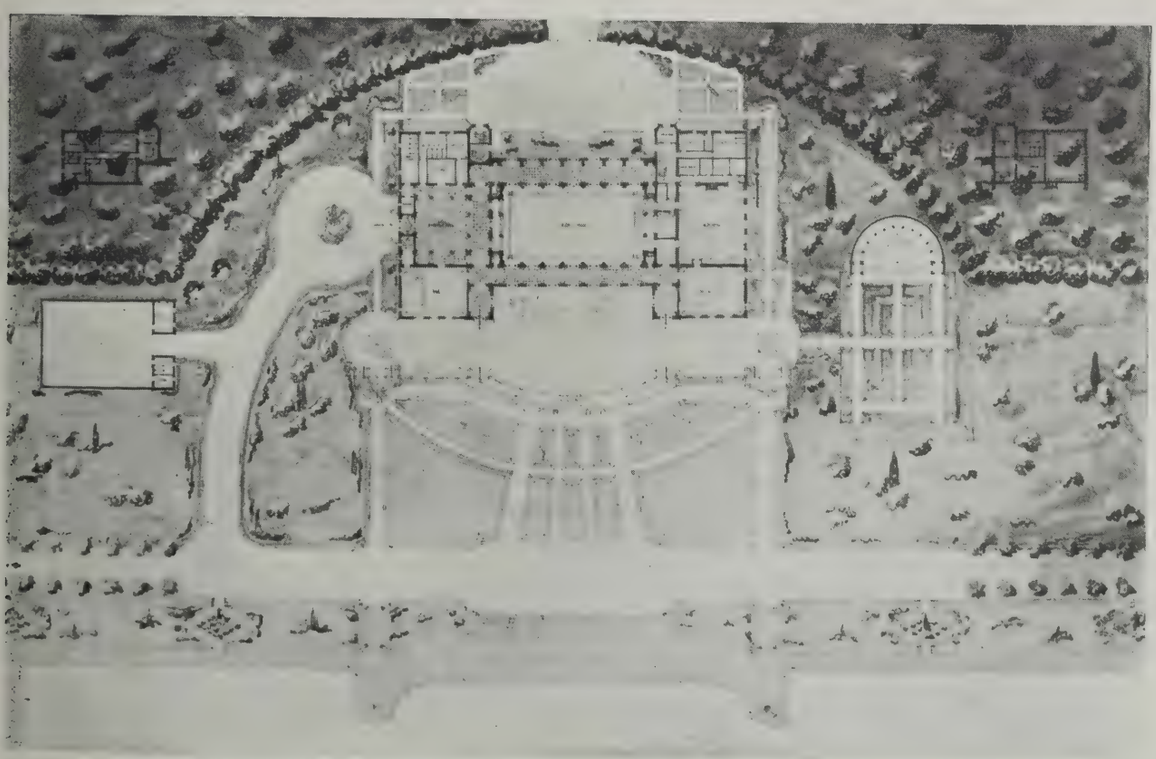
DESIGN BY EDWARD W. MARTIN (LIVERPOOL UNIVERSITY).



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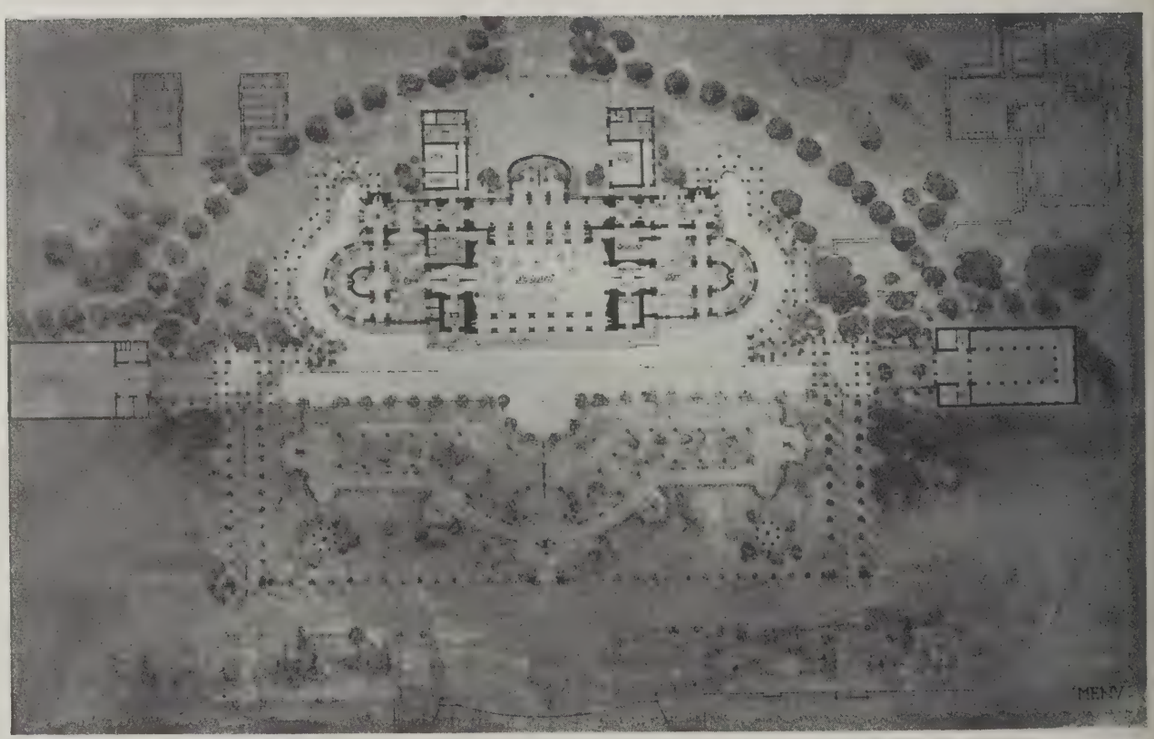
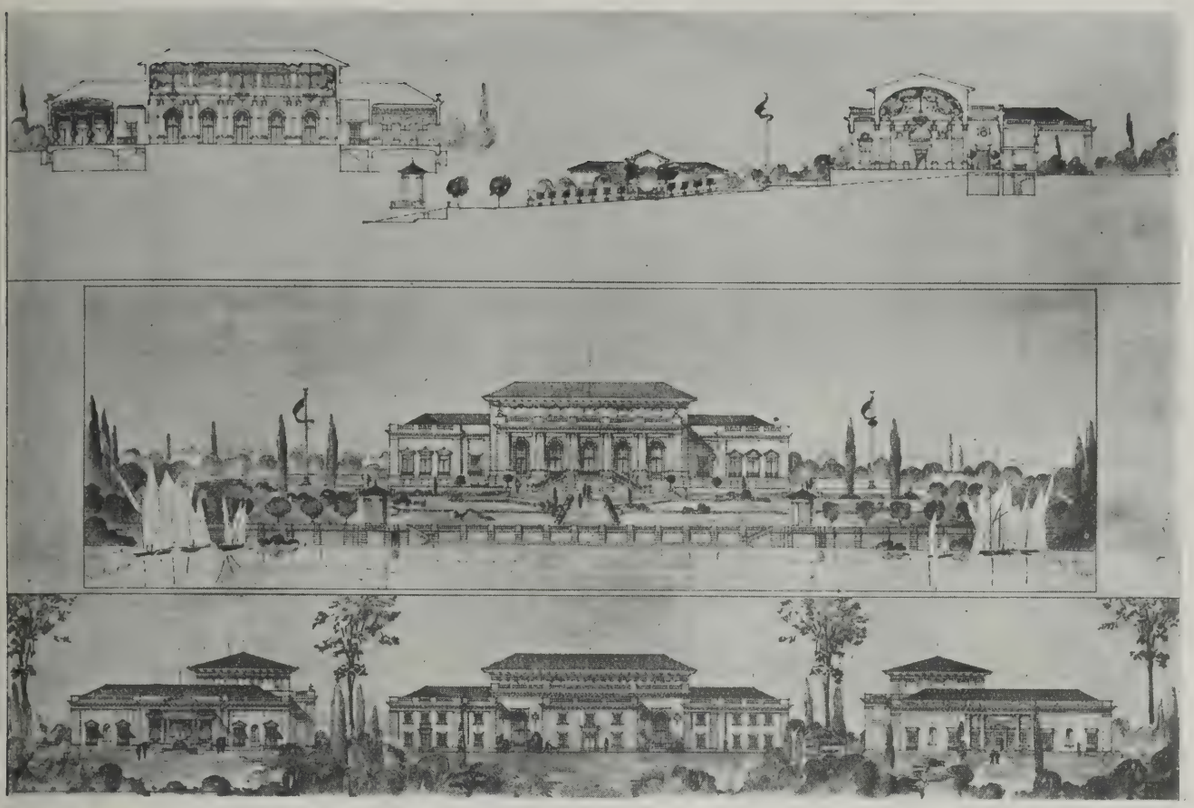
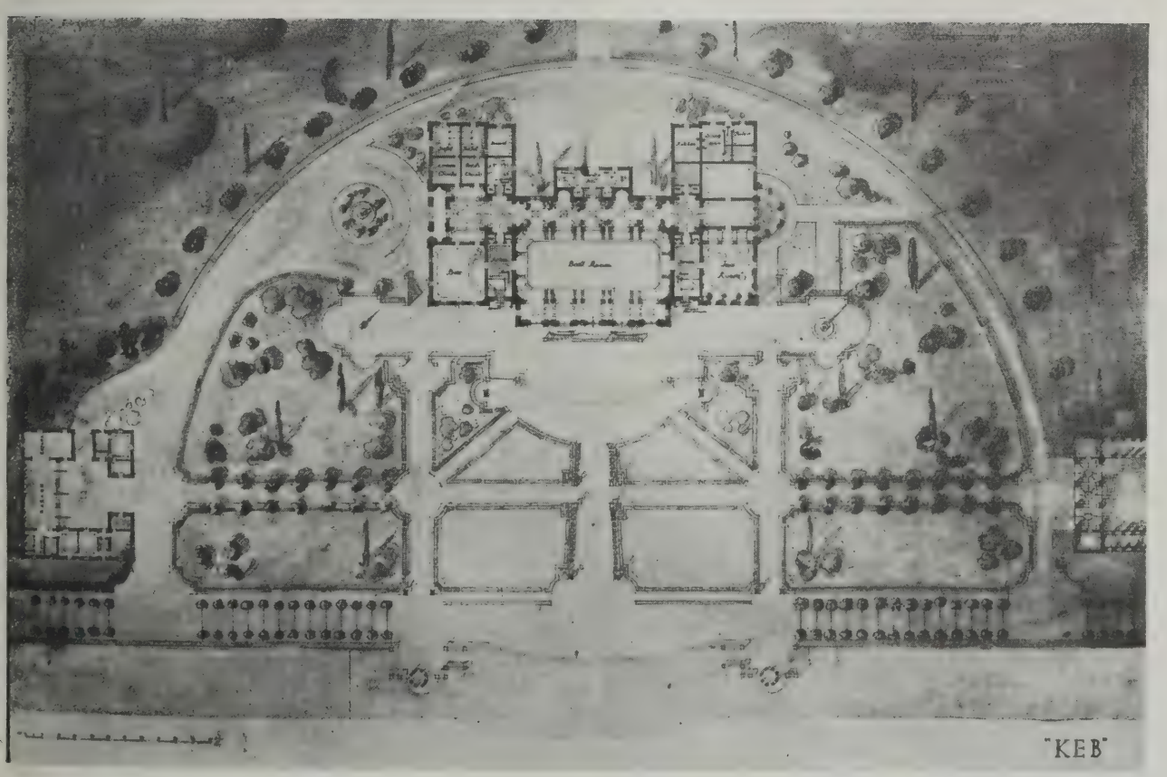
DESIGN BY STEPHEN WELSH (GLASGOW SCHOOL OF ARCHITECTURE AND LIVERPOOL UNIVERSITY).

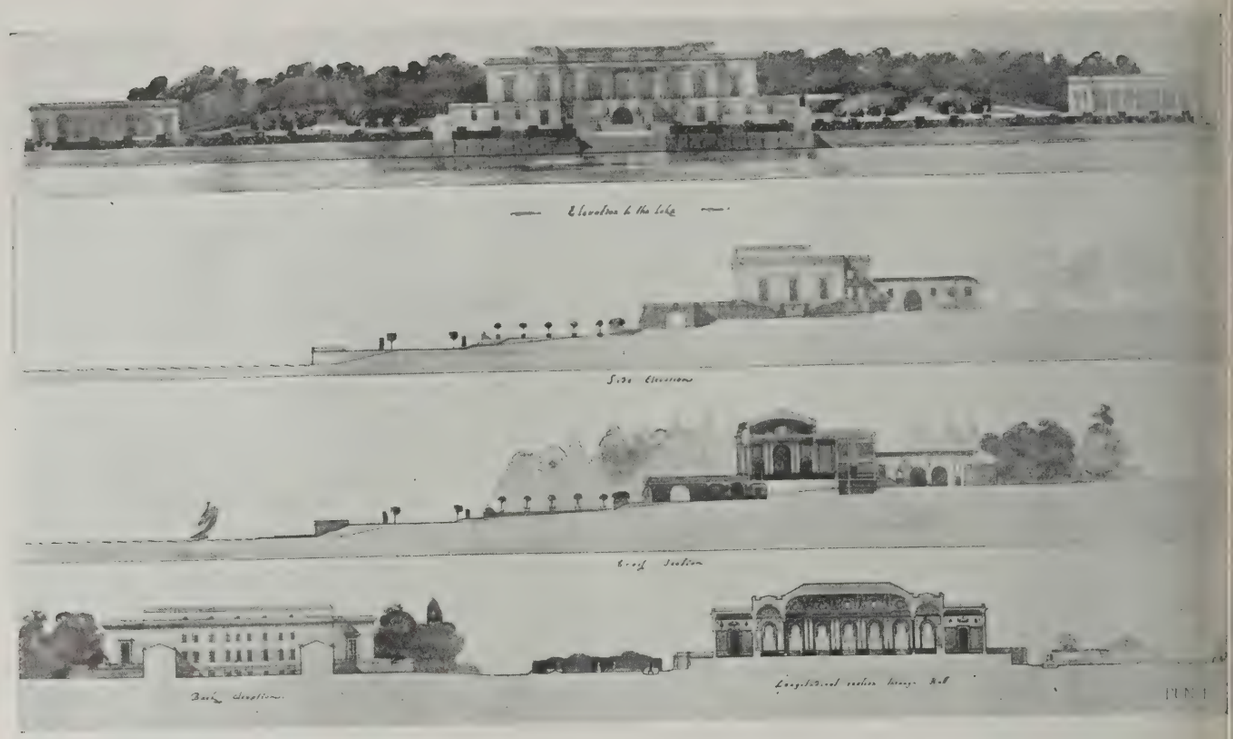


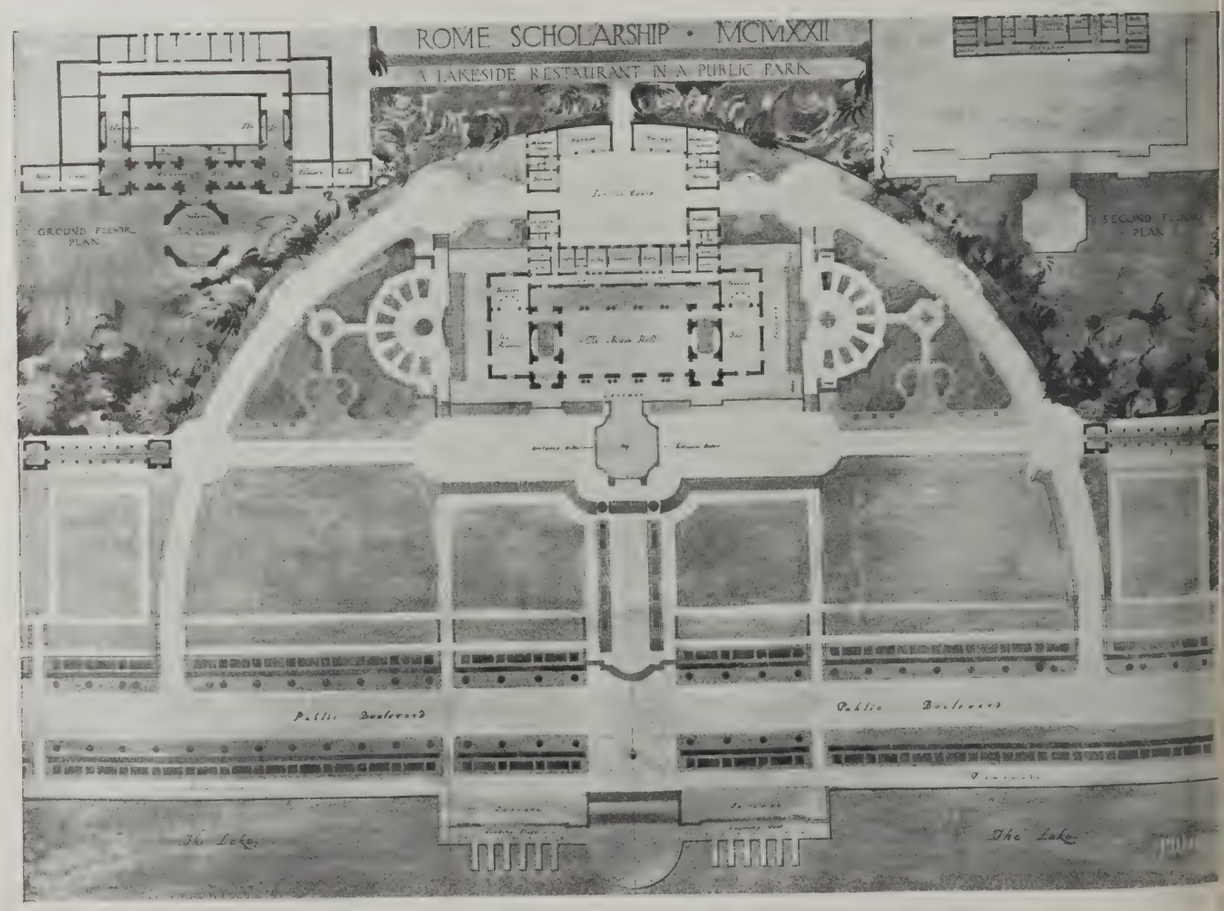
ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY ERIC ROSS ARTHUR (NEW ZEALAND AND LIVERPOOL UNIVERSITY).



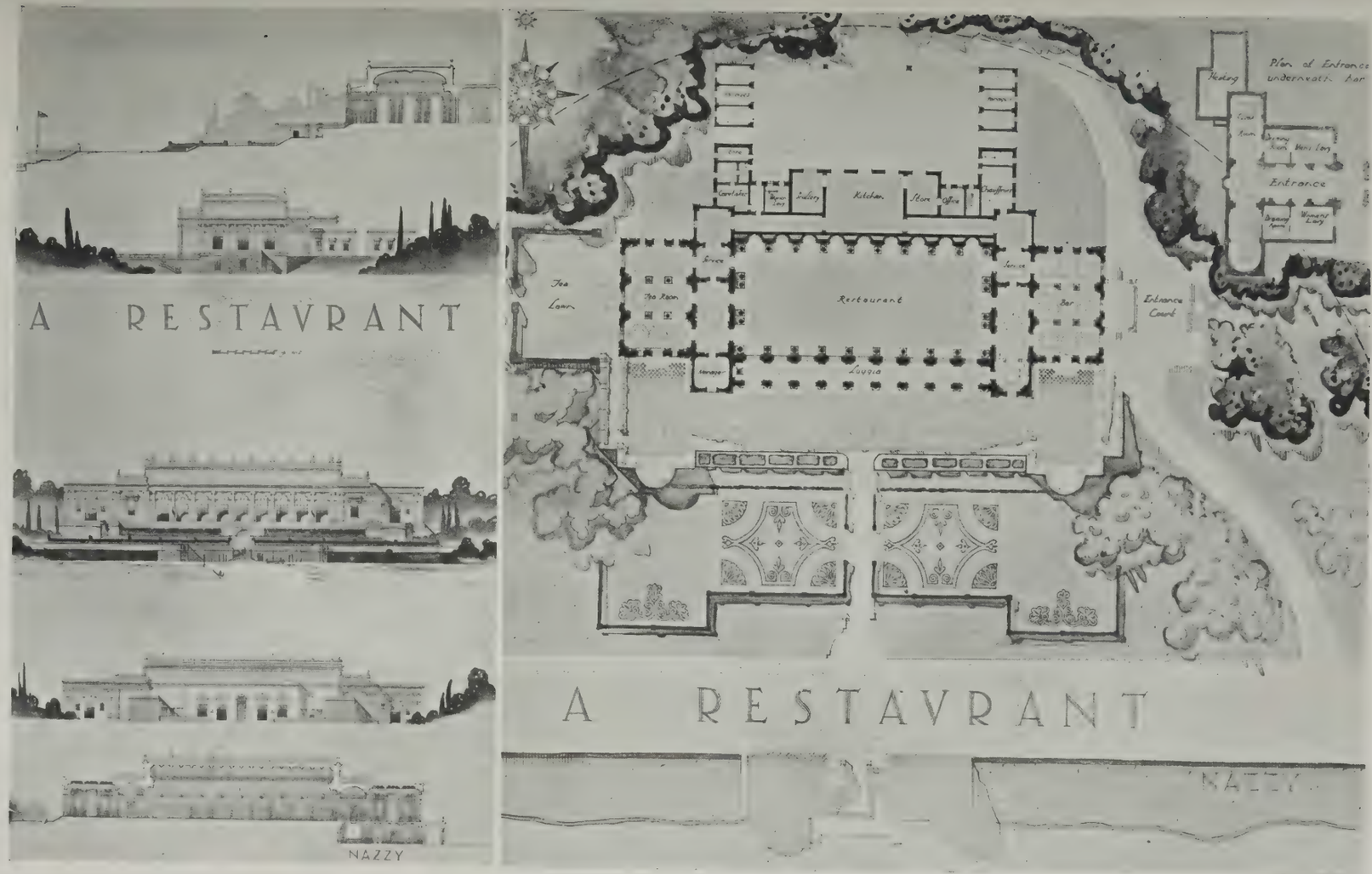


ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY WILFRID B. EDWARDS (LIVERPOOL UNIVERSITY).





ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY REGINALD A. CORDINGLEY (UNIVERSITY OF MANCHESTER).



ROME SCHOLARSHIP IN ARCHITECTURE: PRELIMINARY COMPETITION.
DESIGN BY H. E. HAMILTON HIGHAM (LIVERPOOL UNIVERSITY).

Wolverhampton War Memorial

Mr. John W. Simpson, PP.R.I.B.A., the assessor, has made the following awards in the Wolverhampton War Memorial Competition :—

First premium (150 guineas), Mr. C. T. Armstrong, A.R.I.B.A., 32 Eversley Road, Bexhill.

Second premium (100 guineas), Messrs. Ebbs and Warren, AA.R.I.B.A., Stamford Bridge Studios, Chelsea.

Third premium (50 guineas), Mr. Wilfrid Bond, F.R.I.B.A., 11 Elmer Road, Grantham.

Honourable mention : Major Hugh C. Corlette, Lincoln's Inn, London, W.C., and Messrs. T. Ridge and R. E. Haynes (Shayler and Ridge), The Cross, Oswestry.

The winning design, which is illustrated on this page, has been designed to be in harmony with St. Peter's Church in the background. On the front face of the base of the memorial is shown a carved inscription, with the arms of Wolverhampton immediately above. Corresponding with the arms, on the other three faces are carved wreaths, symbols of reward ; the four sides being linked up to form a band of enrichment round the base. The four niches at the head of the memorial contain on the front the carved figure of St. George and the Dragon, and on the other three faces figures representing the Navy, Army, and Air Force. The memorial is proposed to be executed in selected red Hollington stone, the figures and all decorative work being carved. For the surrounding steps and paving, etc., red Lazonby stone is suggested.

Mr. John W. Simpson, the assessor, states in his report that there were seventy-three competitors. As, however, several authors sent in two sets of drawings, there were actually seventy-eight designs. The standard of design was high, and Mr. Simpson had some difficulty in making his award ; many admirable compositions having to be set aside which would have been successful in gaining a premium in a less closely contested competition. The committee are to be congratulated on this satisfactory response to their invitation. With regard to his awards, Mr. Simpson says that the design which secured first place is a remarkable and original composition, the setting of the monument well arranged, and the author's estimate sufficient. He anticipates that tenders for the work may be received within the amount given. The second design shows a memorial admirable in its proportion and simplicity of effect. The axiated lay-out is especially good. The third design is a good and beautifully drawn Gothic composition, but the author has not given sufficient attention to the design of its surroundings, an important point in this memorial. Both the honourable-mention designs were very able treatments of the subject.

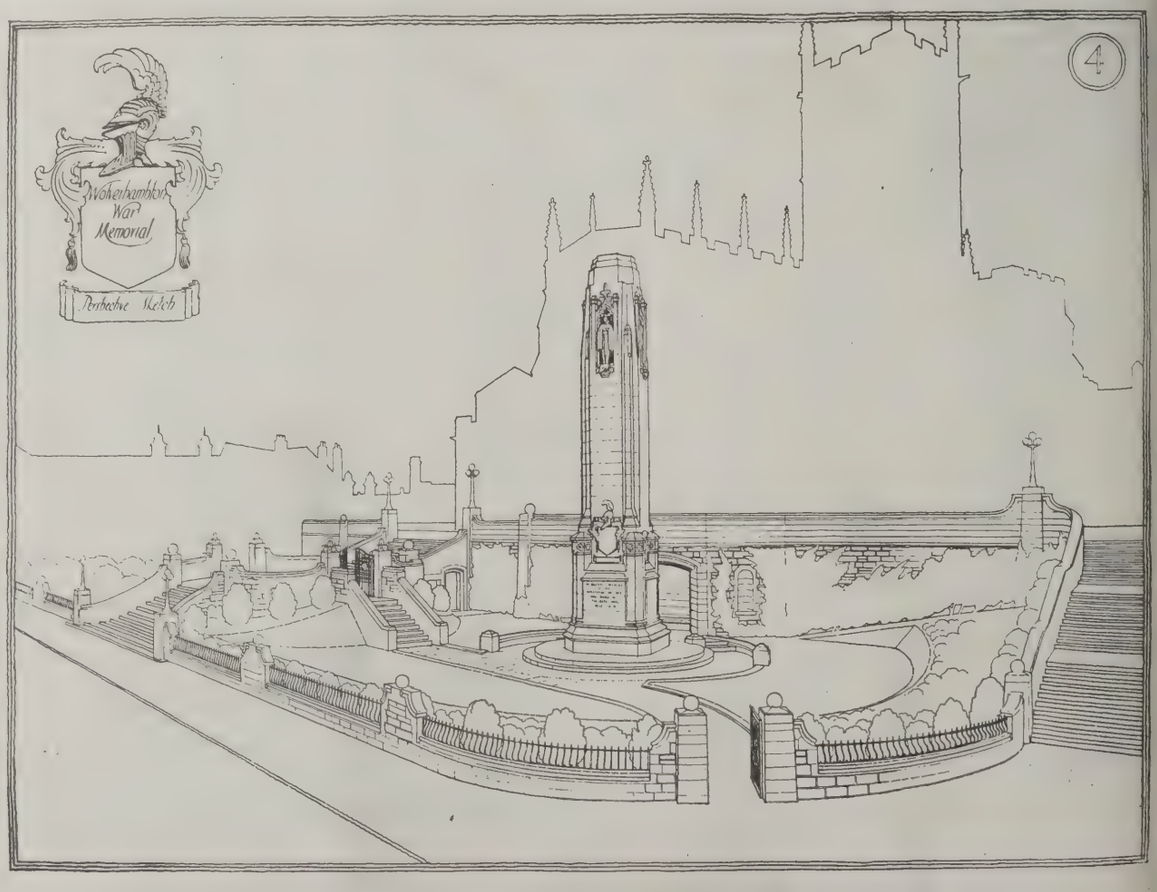
All the designs submitted in the competition are now on view in the Municipal Art Gallery, Lichfield Street, Wolverhampton. The exhibition will remain open until March 3.

The Architect and th People

Mr. Arthur J. Hope, F.R.I.B.A., in course of an interesting address to Manchester Society of Architects on "T Architect and the People," said that ti brought many changes and alterati in the conditions of life, necessitat in humanity a constant readjustm to its surroundings ; and the archit no less than others, must from time time seek to determine his relations to the many prominent and import problems with which he was faced. S examination and criticism were excell things, and good for the profession a whole, but let their criticism be of right kind.

Despite much criticism, they knew th begotten of the needs of the day, architectural work was being acc plished, bearing the stamp of high att ment, worthy to live and take its pl with the best examples, and worthy sustain the interest of the people. did the work command that intere Did it mean to the people all that ar tects desired that it should mean—di grip their imagination and hold a p in their thoughts and affections, or it just casually regarded as folks pa by, without further thought or un standing ? There must be some deep son for the seeming apathy of the pub

How often in the course of the d work were architects conscious that t were writing on the walls of their bu ings a life story destined to endure



WOLVERHAMPTON WAR MEMORIAL COMPETITION : PERSPECTIVE OF WINNING DESIGN.
C T. ARMSTRONG, A.R.I.B.A., ARCHITECT.

OLVERHAMPTON WAR MEMORIAL COMPETITION: ELEVATION OF WINNING DESIGN. C. T. ARMSTRONG, A.R.I.B.A., ARCHITECT.

or generations of men to read, the of the evolution of the people? were thoughtful, honest of purpose, in their art, having knowledge of terest in the lives of those around they should imbue this spirit of into all the work which bore the t of their hands. Thus regarding lves and their work, something han the common bond of interest exist between the architect and ople.

e let it be understood that the gs themselves were the outcome lection of the affairs of human life, arried out in the right spirit could l to attract attention, and viewed would mark the national develop- nd progress. Obviously, to attain in the highest degree, close thy and touch must obtain be- the architect and the people, and er should recognize the gain to the nity in fostering the welfare and ating the value of an art so much o their own nature.

read and heard much of the, ful buildings and building systems erica, the great value of study at r Rome, or the relative merits of rm or another of architectural education; but he thought that, as English architects, practising for English people with English requirements and traditions, they must seek the solution of their problems in the study of the history of our own people.

With regard to registration, Mr. Hope said that if the profession was to be a closed one, and all buildings were to pass through the hands of a duly qualified practising architect, it naturally followed that their professional training must ensure that they were competent not only in purely architectural matters, but in practical and business ones also, well fitted to offer to the people the full service that the restriction of practice would imply they were able to give. In referring to architectural schools Mr. Hope asked whether it was possible to organize school training on the lines of actual office practice, familiarizing the student mind with the same ordered routine of work. As in the medical school the student had the opportunity to "walk the hospital," so in his architectural studies the student should have opportunity of acquiring knowledge of actual craftsmanship and the limitations imposed upon designing by materials and the methods of their working.

The calling of an architect in his relationship with the people was one which, in seeking to combine the highest form of beauty with the utmost usefulness, demanded from its practitioners qualities seemingly impossible. But nevertheless, by diligent application, and by careful thought, a great deal could be accomplished.

At the meeting the president, Mr. A. W. Hennings, F.R.I.B.A., occupied the chair.

War Memorials

Mr. H. G. Watkins, F.R.I.B.A., in reading a paper on "War Memorials" before the Birmingham Architectural Association, observed that a war memorial to be a true memorial must clearly express its purpose. He therefore ruled out all utilitarian structures, and confined himself to those which were unmistakably war memorials, or, in other words, monuments which were combinations of architecture and symbolic sculpture. These he dealt with historically up to the beginning of the nineteenth century, mentioning particularly the Winged Victory of Samothrace, the Arch of Titus, Trajan's Column, and the Gattamelata statue at Padua. He then dealt with the later monuments, classifying them nationally in order to show how the character and ideals of the nation were exemplified in its architecture and sculpture. Italian memorials, as illustrated by that to Garibaldi, were marked by exuberance and freedom from restraint, typical of the race; while the earlier monuments of the Germans were dignified and scholarly until the teachings of Treitsche and Nietzsche began to take effect, when they became coarse and heavy. Of all the nations, perhaps the French showed the truest appreciation of the right combination of architecture and sculpture; while English monuments, though dignified and correct, were rather dull and lacking in imagination.

Since the war the outstanding feature of the great movement to erect war memorials in this country had been the universality of the smaller monuments; and the multiplicity of these in villages, churches, clubs, etc., was very characteristic of the love of home and the individualistic spirit of the British people. As an inevitable result of the tendency to erect these smaller monuments, few of the larger and more elaborate types had arisen, and nationally none of the various grandiose suggestions had yet materialized. Instead they had the Cenotaph in Whitehall, and the simple slab over the grave of the Unknown Warrior in Westminster Abbey, both of which had taken such a hold upon the imagination of the people that it was doubtful whether any magnificent national memorial would make the same appeal to sentiment.

With regard to the vexed question of sites for war memorials, the lecturer thought that a large symbolic monument might well be placed in an open square, provided that there was a suitable background; but the smaller monuments were better placed in unobtrusive surroundings.

Mr. W. Haywood, F.R.I.B.A., proposed a vote of thanks to the lecturer, which was seconded by Mr. H. W. Hobbiss, A.R.I.B.A., and carried unanimously. Mr. H. T. Buckland, F.R.I.B.A., presided.

Correspondence

The Unification "Crisis"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—We are sorry that, in your leading article in THE ARCHITECTS' JOURNAL for February 15, you should so far have misrepresented us as to say that the "Leaguers have not the slightest objection to Registration, but prefer it dead." For many years we have been strong supporters of Statutory Registration, and our efforts to secure this must be remembered by many. We are to-day as much in favour of Statutory Registration as ever. What we do object to is the scheme advanced under the misleading title "Unification." If the Unification and Registration Committee would, in the first instance, prepare a Bill and obtain Statutory Registration, then Unification would follow as a necessary sequence.

There is no need to advance again the arguments in favour of this sequence; but we may say that though we fear no sufficient public benefit can be made out for obtaining Statutory Powers, we should give it our whole-hearted support. Unification without disciplinary powers would render the task of the Institute far more difficult than it is to-day.

Yours truly,
GEORGE HUBBARD.
ALFRED W. S. CROSS.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Concluding your commentary report of the Special Meeting on February 7, you wisely say that "It can only be hoped that native sense, impelled by a desire for the common good, will find a way out." That is quite right, but where the common good is the objective, common justice must, at least, form the ground upon which it is founded, and that is precisely where this "Scheme A" idea of professional unity fails, and it should be obvious that with the dissension it has already created within the ranks of the Institute itself, its failure seems already assured. With all the heralding of their plans the promoters of "Scheme A" are to be commiserated with. A favourable press, and the support of the Governing Body at the Institute that now is, is still not enough to convert us all to this idea of dragooning the R.I.B.A. into a Trades Union Organization, with or without Registration.

The S.O.S. you send out will doubtless influence many minds, but it will not impress all; and where we mainly agree upon matters of architectural interest, on those of polity no one has the right to assume that others will not take a different view, equally at the dictates of common sense, as you infer. Upon questions of polity, then, even those affecting the interests of a great professional institution, there will always be two sides, and that is why professional unity as seen through the coloured spectacles of the "Scheme A" idealists will not, and cannot mature, as it is probably just and right that it should not. A Constitution which has made the R.I.B.A. powerful and respected, and a code of rules which has conferred overwhelming responsibility upon it towards those who have conformed to them, is not a thing to be set aside at the dictates of a section, however powerfully supported. Nor shall we all agree as to the representative character of the Unification Committee. A policy set in motion by 106 voting members only out of some three thousand, however constitutionally conducted, by no stretch of imagination can be regarded as ideally representative; and if such a term is to be justified let its promoters seek some broader means of obtaining the considered opinion of the R.I.B.A. members as a whole, without thrusting upon country members the obligation of a next to impossible journey to London to register it, even were such a course practicable.

It is an equity with us that a man is entitled to retain what he has earned by hard effort, whether in specie or kind, and any such proposals as those under consideration for the Institute to give free to one set of individuals what it has sold to another, cannot be defended on grounds of general professional interest. I am not entitled to speak for the R.I.B.A. Defence League, though a so-styled "reactionary," but I think you completely mis-state the case when you imply that it exists to destroy Unification. Rather do I think it points the way—and the only way it can be sought, first, by general agreement—upon the Registration question, which hitherto the Institute has never supported; but we do not believe in the lure of its membership being made the means for bringing it about, and are convinced that any such line of action will make not for unity, but for disruption.

Yours faithfully,
WILLIAM H. ASHFORD, A.R.I.B.A.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Many provincial architects, like myself, who attended the special meeting of the R.I.B.A. on the 7th inst., must have been very disappointed when they opened the "R.I.B.A. Journal" to find that the resolution which was carried is null and void owing to the rule of a two-thirds majority.

London architects and those who practise in large towns (also the writer of your article) evidently have no idea how highly prized are the letters A.R.I.B.A. by their country cousins, who have to compete with the small auctioneer and builder's clerk, who style themselves "architects" and carry out a considerable amount of architectural work.

If all who call themselves architects are to be admitted into the Institute, then the examination which we passed, and which lifts us above these others in the eyes of the public, was all in vain. It was to prevent this and maintain the status of the R.I.B.A. that we journeyed to London to vote against the proposition to admit "all" architects into the R.I.B.A.

PERCIVAL C. BLOW.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—You have devoted a leadi article to attacking the resolutio "passed" by the Associates of t R.I.B.A. by a majority of nearly 63 p cent. of voters, the total require for a legal motion being 66.6 per cent. should be obliged, therefore, if you wou allow an independent Associate to expre what is in his opinion the real grievan which lies at the root of the Associate attitude. It is not, as you suggest, reactionary spirit. We are all, I believ in favour of Registration, but we will n have the Committee's scheme.

Up to the time of the war the lette A.R.I.B.A. could only be adopted by m who had qualified by a stiff exam. for t privilege of using them. It was the ha mark of accomplishment and the on guarantee to the public, whether th recognize it or not, that the man th employed had *qualified* as an architec There are Associates who will not ta the Fellowship because in that case th would lose this distinction.

At the local conferences held, a rep sentative of the Committee allowed us understand (in this district at least) th the laborious years of the Associat would not be rendered void by t swamping of their class with people w could not pass, or, for some reason, ha not passed the Institute's exams.

Now suddenly we find that a Committ consisting of some sixty-eight people, o of whom only about thirty are qualifi by the exam., propose to do this ve thing without apology. The Associat quite rightly, will not have it. They a only amused by the majestic displeasu of the Fellows. They, the Fellows, m take the outside "architects" into th class if they wish; I do not think t Associates will greatly object. Out nearly a 1,000 Fellows only about 3 have passed the Associates' exam. T Committee may bring them into t Licentiates' class when they will; we ho however, they will be required to be least the same standard as these gent men. They may adopt Mr. Honeyma suggestion in the JOURNAL of January which seems to be one of the best id we have had.

I do not think, however, they will allowed to compel the Associates (wh class is after all, the only pure one) accept.

This is at the root of the idea which v put forward to Mr. George Hubbard th in the event of the Associates class be compulsorily garbled, the qualified me bers of the Institute—*i.e.*, those who h passed the exam.—should resign a form a new body to be called "T Association of Qualified Architects," if the Committee's scheme were carri they, the Associates or ex-Associat alone would hold the standard of e ciency determined upon as being nee by the Institute for competence; and t is the conviction which will smash a such travesty of justice as is proposed the present Registration Committee.

feel sure that if all members had been sent the majority would have been ch above the two-thirds required.

Truly yours,
"PROBATUM EST."

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—There is every prospect of the ncil's actual proposals in the matter Unification being laid before the mbers of the R.I.B.A. long before the t General Meeting, for consideration the matter, can be held; but it will be l to correct some of the imaginary s at once. In the first place there is now familiar fiction of the words "all hitects" used in the sense of all who l themselves architects being admitted the Institute. Happily those who deal h the business of the R.I.B.A. know ctly what an architect is, and are in no ger of mistaking an undertaker for . Those who, all too credulously, epted this fiction should look through eme A—published in the Journal for y 28, 1921—and they will be reassured. Then there appeared at the meeting on 7th an impression that the suggested porary procedure for admission to the .B.A. was actually to be permanent. is is not the case, and a reference to eme A makes it clear.

One speaker referred to all outside hitects being admitted to the Class of sociates. It is scarcely necessary to lain that this is not intended.

What one would like to hear explained vhy Mr. Cross and Mr. Hubbard, after aching Registration by Statute steadily a great many years and addressing etings up and down the country on it, now suddenly convinced that it is an possibility. It is a view that many of cannot share. Also, why Mr. Perks, ing distinctly stated that a Registra- n Act will "never" be obtained, asks to postpone Unification until such time a Registration Bill becomes law? is an odd proposal, but perhaps he some ground for it that is not ap- ent.

As an Institute man I naturally wish ification to be in the hands and under direction of the Institute, and not in hands of a body set up by Act of liament. May I give just one instance how Registration under an Act oper- s? It comes to me from Mr. Hurst ger, and relates to New Zealand, where gistration by Statute is an accomplished t. A builder applied for registration, s refused, applied to the Court under terms of the Act, and was placed on register because the judge was satis- . that he practised as an architect. is apparent at once that this would happen under Scheme A for Unifica- n within the R.I.B.A.

May I point out especially to the nger men in opposition that the same rnings and alarms as the present ones e heard when the Class of Licentiates s formed about twelve years ago: it s stated that the prestige of the In- ute would suffer, that men of good ding would withdraw, and all the of it. I think no one will contradict when I say that the Licentiates have ified the measure of confidence re- ed in them, that they have shown at abilities, and that their alliance h the Institute has been of much value t. So much is this the case that it is erally felt to be due to them that they should have a larger share in the management of and responsibility for the affairs of the Institute.

Is it too much to ask for the opposition that is being so strongly and, as I think, unfairly pushed to be held over until the Scheme of the Council in detail is published? At present the talk about the matter is wide of the mark, and the desire of those who are working the opposition seems to be to prevent the Council from being given time to develop its Scheme and place it before the Members.

A thing not sufficiently realized is that we have legal power to prevent any outside architect from using initials that would suggest membership of the Institute. A Registration Act might give us the power to prevent anyone not on the Register from using the designation of architect. Which has more value?

Yours faithfully,
ARTHUR KEEN,
Hon. Secretary, Unification and Registration Committee.

Mr. Creswell and "The Commercial Ideal"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Creswell's address on "The Commercial Ideal," as I read it in your Journal, was so interesting that I cannot resist making a few remarks on what seems to me the vital point of the question at issue.

Mr. Creswell expressly states that it is not commerce which he is objecting to; it is the commercial ideal that is to say, the ideal of the man whose sole interest lies in his bank balance, who will exploit anything and anybody if he smells money. Note that Mr. Creswell is not quarrelling with the commercial man. It is the Ideal which he deplores, which he sees permeating every form of modern life, threatening the professions (the architectural profession amongst them), and it is this which he, with every honest man, aims to destroy.

But how does he mean to destroy it? From his address that is quite obvious. He means to oppose it, to proclaim it, to hold it up to scorn. "What can we do to combat this poisonous ideal?" he asks; and answers: We can "tear the false thing out by the roots; proclaim the stupid hypocrisy; wave it in the air; expose it; ridicule it; and denounce it."

I wish to suggest that there is another way in which the problem might be dealt with.

The commercial ideal exists in commerce. Why not go back to the first cause, therefore, and see if we can do nothing to improve it? Commerce is actually the basis and condition of modern society, but why, because it has to do with money, should it necessarily be a mean and worthless pursuit? Why, instead of ridiculing, exposing, and denouncing the poisonous thing in commerce, should we not endeavour to redeem commerce itself, not by boycotting everything commercial, but by going in for commerce ourselves—we, the architects, artists, cultured, educated men, men with ideals and men with brains—each working in his sphere to make the making of money not a vulgar and degenerate performance, but a noble exertion in which the first idea is that of creation, and the second idea that o service?

If to-day one glances through the advertisement pages of any paper one happens to pick up—your own Journal, for instance—one is bound to confess that there is some new spirit moving in business circles which is other than commercial. This must be evident, I think, to any observant person; and it seems to me that it is the new idea of which I have been speaking—the desire to create and to serve.

Yours faithfully,
"LOOKER-ON."

Competitions

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The letter in your issue for February 8, signed by "Palmam qui meruit ferat," is worthy of attention. He refers to two recent war memorial competitions in which the names of the winners were not even announced to the other competitors. Surely this is not playing the game?

The writer personally knows of one of these competitions referred to, which was decided so long ago as September 1921. Unsuccessful competitors received due announcement of their lack of success, also a copy of the assessor's report, which in this particular instance referred to "designs of a high standard—many admirable compositions having to be set aside which would have been successful in a less keenly contested competition."

Participants who have cheerfully toiled through such broiling months as July and August last year to prepare designs which would be worthy of such an object have earned the right to examine, and criticize, if necessary, the successful competitors' compositions.

Yours faithfully,
A.R.I.B.A.

Certificates of Polytechnics

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In view of the many remarks, spoken and written, on the subject of architectural education, I wish to bring to your notice a case of undue hardship to the ambitious student.

At a certain polytechnic I attended regularly a course of lectures and studio work for three hours an evening on two nights each week, the subjects being architectural history, ornament, and design. At the close of the session, at considerable inconvenience to myself, not to mention the question of expense, I sat for the examination which extended over four evenings. I passed in the subjects I sat for, incidentally obtaining a first-class in one subject. On enquiring for my certificates I was told that none was issued in single subjects, but only to students taking a group course. Thus I have nothing to show when applying for a post.

Surely something should be done to remedy this defect. I take this opportunity of warning intending students at classes to enquire whether certificates are issued and whether the school is a "recognized" one or no.

Yours, etc.,
"P.A.S.I."

[*Further Correspondence unavoidably held over till next week.*]

Little Things That Matter. V—Miscellaneou

By EDWIN GUNN, A.R.I.B.A.

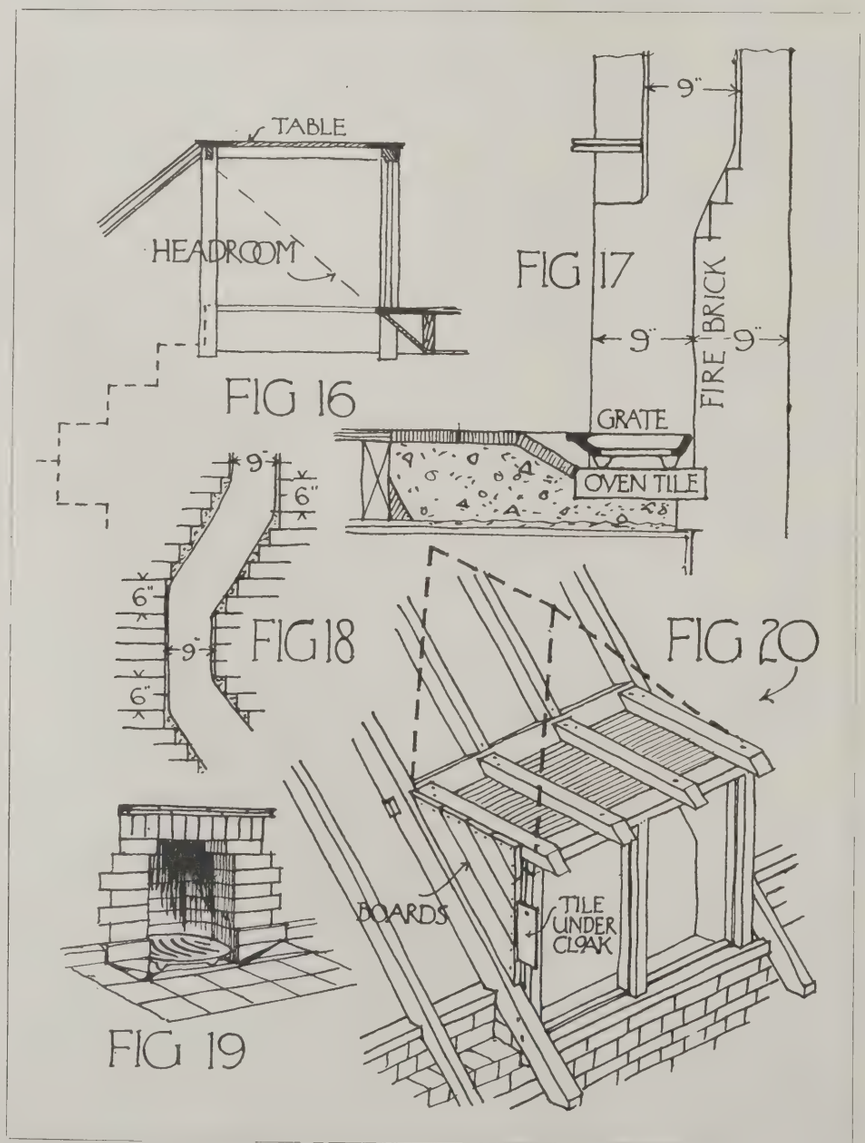
Stairs.—A builder, unless otherwise instructed, seems always to paint stair margins. When treated in this way the stair margins quickly become shabby, and a better way is to stain them with a creosote stain. A method of treating old worn stairs, which looks excellent and is very practical, is to fit new oak nosings standing about ¼ in. above the old treads, and fill up with plain lino fitted separately to each tread. A very useful provision is a stairhead table, which can be contrived at the balustrade level over the return flight below, without any sacrifice of space. The usual "close thing" in stair trimming may be made still closer by keeping back the joist, and bracing the projecting floor boards and nosing by a raking lining. See Fig. 16.

Shelves.—It is a good practice to fix the larder and similar shelves with a 1 in. space between their back edges and the walls. This is most easily done by fixing continuous vertical grounds 3 in. by 1 in., to which the shelf brackets are screwed. This 1 in. space prevents the accumulation of dirt, improves air circulation, and permits the shelves to be cleaned without smearing the walls.

Fireplaces.—A good deal has been written lately of the saving in space gained by the general adoption of gas fires. Every one cannot have gas, however, but space can often be saved in minor fireplaces by avoiding undue depth of reveal and needless width. It is quite possible to get such a fireplace into the through depth of a 9 in. flue, viz., 18 in., by making the reveal only 9 in. in depth. The chief point to remember is that the flue must sometimes be swept, so that the 9 in. back to the fire opening must weather off below the head. So that this aperture may not be too glaringly visible it is advisable that it be kept low—1 ft. 9 in. is ample (Fig. 17). To ensure a good draught every chimney should have at least one cripple; a simple rule to ensure that no contraction takes pl at this vital point is a two-course diffi ence between the gathering point at opposite sides of each bend (Fig. 18).

The effective size of a small room much increased if a kerb or fender can entirely dispensed with. A hearth ty of grate-bottom set level with the floor a splayed sinking achieves this with p fect safety (Figs. 17 and 19).

Dormers.—A great deal of bungling a round-about methods are often displa in the treatment of dormer cheeks. T usually leads to a thick cheek, which calls a cover slip, leadwork, or some ungai addition to what is properly a very sim thing. Fig. 20 shows a simple and sat factory treatment of a small dorm The trimming rafters are fixed close to the window frame, which is stayed ba to the trimmer by shallow ceiling jois The dormer roof is tied sideways by colla The actual cheeks are formed by groov and tongued boarding running paral to the roof pitch, and nailed from si head to frame, without studs. T boarding stops short of the groove on t back of the frame, so as to allow a t undercloak to be fixed as shown. T groove on the frame intercepts any slig leakage, and conducts it down to the o cill, whence it weeps out. Internally t diagonal boarding is counterlathed, a plastered out. It is not too easy describe, but very easy and natural to Lead soakers are laid in with the r tiling, turned up against the boardi and covered by the tile hanging or cheek which is nailed to the boards witho battens. The hip roof is omitted in t diagram, its general outline being sho by dotted lines.



Deliverance from Drudger

An exhibition bearing this optimist title is now open at the galleries of t Design and Industries Association 6 Queen Square, W.C.

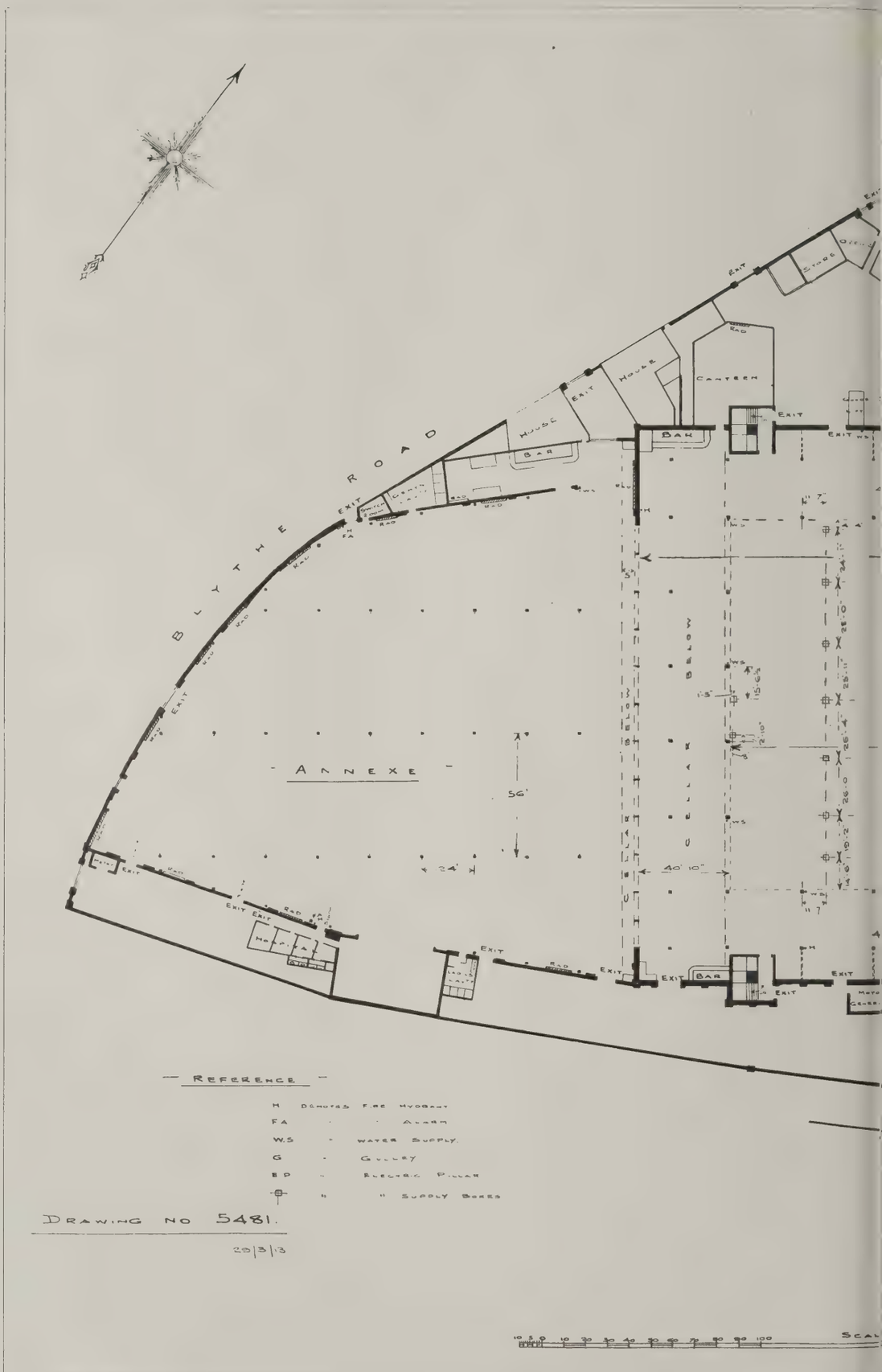
There is nothing very new or excitin to be seen—Olympia has made us famili with most of the exhibits—but to o who is more or less inured to "labou saving devices," the attitude of fello visitors gave food for thought.

Much evidently remains to be done the way of educating the general publ in the true economy of labour, and it for architects to instruct their clients the proper equipment of the mode house. Electricity makes all things eas but the average housewife is pitiab ignorant of its possibilities, and as w have previously hinted there can l little development in this direction un power circuits are universally installed.

Apart from this, wall surfaces, met work, kitchen, bathroom fitments mu be matters of serious study nowaday and the promoters of exhibitions such a this do real service in demonstrating th ideal combination of beauty and effic ency.

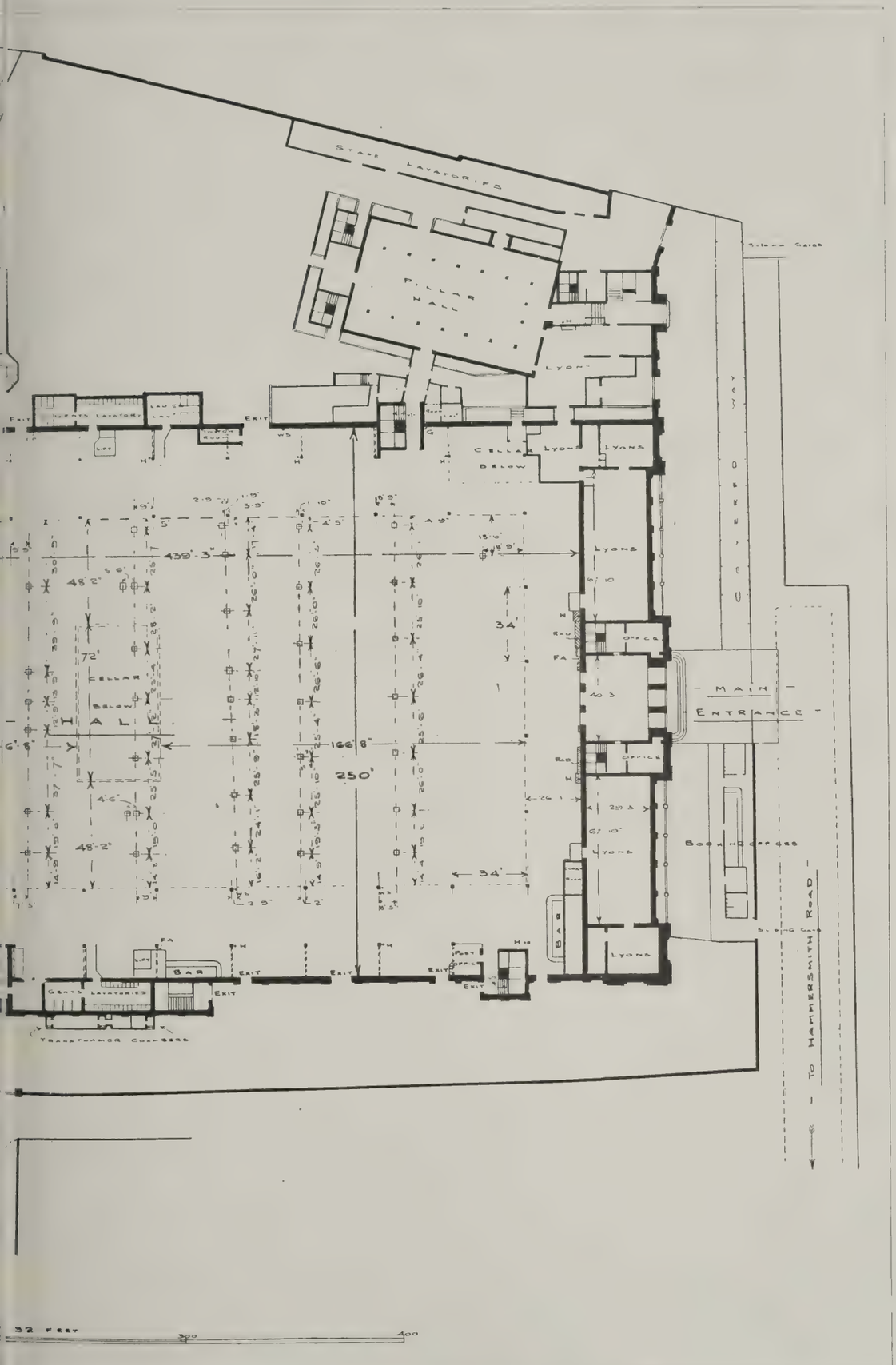
The Design and Industries Associatio have a fine goal in view, and deserve th strong support of the architectural pr fession.

Plan of Olympia for Use in our Bu



Full particulars of our Building Exhibition Stand and Lay-out Competitions were published in last week's issue. Olympia will be found very useful by competitors in preparing their lay-outs, which may be traced di

hibition Stand and Lay-out Competitions



of the requirements and conditions is given again this week, on page 312. The above plan of the ground floor of his method is preferred to the preparation of a new plan to the larger scale mentioned in the conditions.

The New Olympia

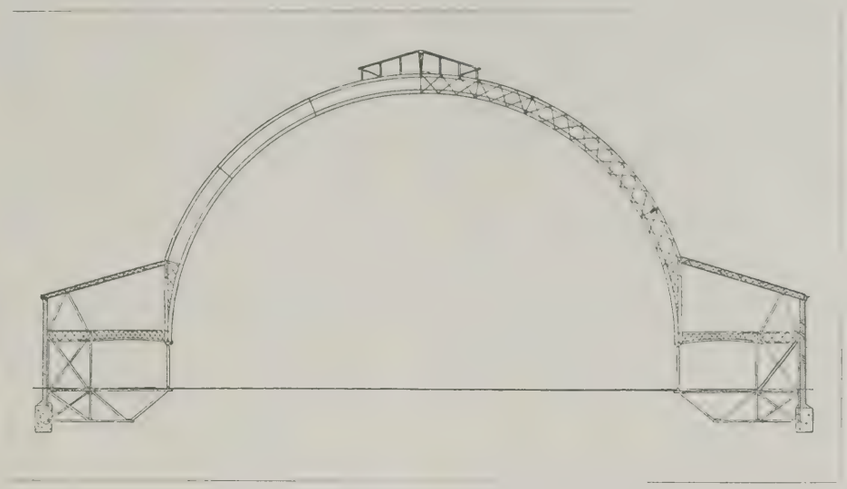
JILDING operations are to be commenced for the enlargement of Olympia at the earliest possible ent. It is hoped that the new hall be completed in time for the Autole Exhibition in November this year, der that once again that show may ›used under one roof.

›m the accompanying diagrammatic which is reproduced by the courtesy he Autocar," it will be seen that the hall is to be erected between the ng Olympia and the Hammersmith l, the site at present being occupied ›use property, which has, of course, demolished before building operaproper can be commenced.

cording to our contemporary the rectangular hall will be approxily 265 ft. long by 175 ft. in width, it will be connected to the existing ing by a broad passage approxly 95 ft. wide and 97 ft. long. ›site this passage, on the other side e building, will be the main entrance the Hammersmith Road, with a ble restaurant and cloakroom builderected in the triangular space een the side of the new hall and the mersmith Road frontage. Round new hall will run a gallery, 30 ft. connecting up to the existing gallery e main hall.

e effect of the new building will be to ase the capacity of Olympia by st one-half, and the total floor space it is estimated, be increased from ›ximately 200,000 sq. ft. to rather 300,000 sq. ft.

turally, at this early stage the plans ›y no means complete, and may be cted to many alterations of detail; he new building will be of much the construction as the existing buildınd will have a single-span glass roof ed on steel girders of much the same



SECTION THROUGH THE ROOF OF OLYMPIA

shape, although not carried quite so high, as the roof of the existing building.

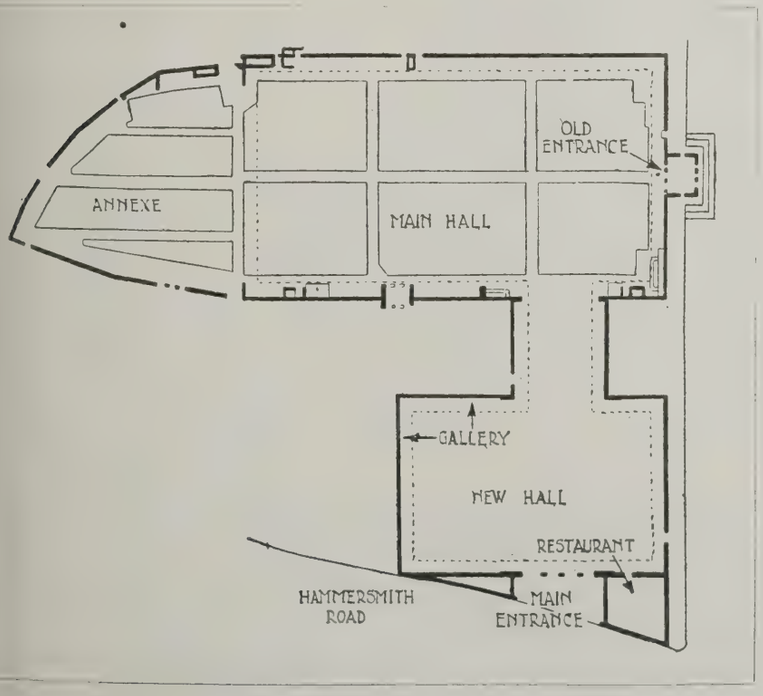
In connection with these extensive additions it is interesting to recall that the foundation-stone of the present building was laid in July 1885, and that the opening ceremony was performed on Boxing Day 1886. The architect was the late Mr. Henry E. Coe, but owing to ill-health he resigned his position while the work was in course of erection, and he was succeeded by Mr. James Edmeston, F.R.I.B.A. (Mr. Coe, it may be mentioned, was the architect of the Royal Agricultural Hall at Islington, in conjunction with his partner, the late Mr. Peck.) The roof of Olympia, and its structural ironwork generally, was designed and carried out under the supervision of Mr. A. T. Walmisley, M.I.C.E., and Mr. Max am Ende, M.I.C.E. The building contractors were Messrs. E. Lucas and Son, of Kensington, their contract amounting to over £130,000,

Originally the building was called the "National Agricultural Hall, Kensington"; the name by which it is now known was adopted when the Paris Circus Company were giving performances there.

The roof of the building, a diagram of which is reproduced on this page, has an extremely light appearance, by reason of the fact that every detail was adapted to meet the various stresses found by calculation (so as to avoid any unnecessary surplus material), and by a careful study of all the possible stresses resulting from equal and unequal loading, including wind pressure. The design is remarkable for the entire absence of long wide plates and webs, the various parts of wrought ironwork being composed wholly of flat bars and angle-irons riveted together, plates being introduced only where required to cover joints. In all there are about 1,200 tons of ironwork in the building.

The main hall of Olympia is 439 ft. long by 250 ft. wide, the height to the crown of the roof being about 100 ft. The main ribs of the roof have a clear span of 170 ft., and are placed 34 ft. apart. They are of box-girder form, 7 ft. deep and 2 ft. wide. The interior depth of the building from the front entrance to the back wall of the annexe is 670 ft., and the average width of gangways between stands is roughly 8 ft. The gallery around the hall is 39 ft. wide on three sides, and 24 ft. wide on the fourth side. It is covered by a lean-to roof, which abuts against the curved rib on the north and south sides, and is attached to the horizontal member of the end screens on the east and west sides. The pillars supporting the galleries are 15 ft. 9 in. high and 34 ft. c. to c., being joined together by arched girders, the soffits of which, at the highest point, are 17 ft. 4 in. from floor level.

The brick walls of the building are not called upon to resist any portion of the thrust from the roof, as the side frames through which the gallery floor passes form a self-contained system of ironwork,



PLAN OF OLYMPIA AND ITS NEW HALL

in which the thrust is ultimately conveyed to the ground. Below the top of the roof over the side galleries the arched rib forms on each side an ornamental spandrel, which rests upon a column 12 in. in diameter, with $\frac{5}{8}$ in. thicknesses of metal, while the connection between the main rafter of the side roof and the arched rib is formed by a top plate which practically acts as a hinged or spring joint, whereby the complication of a fixed connection was avoided in the calculation of the stresses.

On the assumption that the wind may be taken as acting normally, the maximum and minimum loads on the column under the springing of the rib amount to $82\frac{1}{2}$ and $49\frac{1}{2}$ tons respectively. These columns are of cast iron, and have a ball-and-socket bearing at each end, the top bearing being concealed by a foliated capital, and the bottom bearing by a cast-iron base, giving the appearance of an ordinary column.

By the introduction of this pivoted connection, the strains which the columns resist are always vertical, and therefore definite. The dead-weight only of the ribs comes upon the columns, any lateral thrust being resisted by the sloping lattice girders forming the main rafters of the lean-to roofs, and by them transmitted to the iron abutment framings which form partitions in the side aisles.

The screens which close the semi-circular ends of the roof are of vertical ridge-and-furrow construction, this form offering great resistance to wind-pressure, while at the same time requiring a minimum amount of material. The framework of this part of the structure is of mild steel.

The cost of the iron and steel work erected complete was from £26 to £27 per square of 100 ft. superficial area. Not a single accident occurred during the erection of the building.

The following comparison of five great roofs is interesting :—

	Span.
St. Pancras Station, London	240 ft.
Central Station, Manchester	210 ft.
St. Enoch's Station, Glasgow	198 ft.
Olympia	170 ft.
Crystal Palace	104 ft.

Exhibition of Architects' Working Drawings

To-day, Wednesday, is the opening day of the Exhibition of Architects' Working Drawings in the Galleries of the R.I.B.A., 9 Conduit Street, W.1. The exhibition is intended primarily for students of architecture, to whom it should prove of the greatest interest and assistance. They will be able to examine the kind of drawing which a practising architect hands to a contractor, and will thus be afforded a unique opportunity of gaining an insight into the methods adopted in a modern architect's office. Sir John Burnet, A.R.A., has kindly offered to lend the drawings of the "British Museum Extensions," and Mr. A. J. Davis and Mr. Ralph Knott have kindly offered drawings of "The Morning Post Building" and the "London County Hall" respectively. The exhibition will be open until March 18, 1922, between the hours of 10 a.m. and 5 p.m. daily, and 10 a.m. and 1 p.m. on Saturdays. Admission is free.

Building Exhibition Stand and Lay-out Competitions

Readers are invited to take part in two competitions which have been promoted with the object of making the Building Trades Exhibition more attractive architecturally. They are invited to send in suggestions for its improvement both in detail—that is as to individual stands—and in general lay-out. The additional hall which is to be erected at Olympia is to be disregarded for the purposes of the competitions.

Prizes as set out below are offered for the designs we select as being the best under the two descriptions following :—

A.—A Design for an Exhibition Stand.

B.—A Design for the Architectural Lay-out and Treatment of a Building Exhibition held in Olympia.

Fifteen prizes will be awarded as follows:—

A.—For the Stand : first, £10; second, £5; third, £2; and five consolation prizes of £1 each.

B.—For the Architectural Lay-out and Treatment a prize of £10, one of £5, and five consolation prizes of £1 each.

Competition A.

With regard to Competition A it is to be assumed by competitors that the stand will occupy a floor space of 16 ft. by 20 ft.

The architectural character of the stand itself, and the materials to be employed in its construction, are left to the discretion of competitors themselves, as it is felt that hard and fast conditions are undesirable. Beyond the restriction of site area there is nothing to hinder the free development of ideas, though it will naturally be understood that extravagance in height and in architectural character are things to be avoided.

It may be assumed that the stand is an isolated structure having gangways on all four sides.

Exhibition stands are necessarily of many varieties, and competitors are at liberty to select any type they like. Designs should be specially prepared, however, with a view to interpretation in some specific material—brick, stone, marble, concrete, tile, plaster, natural wood, wood painted or enamelled, and so forth. Appropriateness to purpose and simplicity of design are the factors that will be primarily taken into account in making the awards.

Designs for the stand, made on a single sheet of either cartridge or tracing paper, should include plan, sections, elevations, and perspective, to $\frac{1}{4}$ in. scale, drawn preferably in pen-and-ink, though wash rendering will be admissible.

Competition B.

The plan reproduced in last week's issue is of the last exhibition, and is given merely as an indication of the area to be treated. The existing arrangement of gangways need not necessarily be adhered to. A plan true to scale is reproduced on the double-page plate of this issue, and this should be followed by competitors in preparing their lay-out schemes. (A bird's-eye view and elevations and sections may be added considered necessary.)

In the likely event of any firm desi to carry out a design on some fut occasion the rights of competitors rem intact, and designs will be published copyrighted with a note to that effect.

Readers may enter for both comp tions, but they must not submit m than one design in each.

The name and address of competit should be sent under sealed envel addressed to the Editors, and desi should be submitted under a *nom plume*.

Drawings marked "Exhibition C petition" should be packed flat or sen a cardboard roll, addressed to the Edit THE ARCHITECTS' JOURNAL, 27–29 Tot Street, Westminster, to arrive not l than first post on Monday, March They must be accompanied by a cou which will be published later.

Architects' and Surveyo Approved Society

At a general meeting of members the Architects' and Surveyors' Appro Society the Committee of Manageme proposed new scale of benefits, m possible by the very satisfactory finan position revealed by the Governm valuation, was approved. In future Society, membership of which is exclu to those employed in architects' and veyors' offices whose salaries are less t £250 per annum, will be able to give following benefits : Maternity ben £2 10s.; sickness benefit—men 17s. women 14s. 6d.; disablement ben 8s. 9d.; dental treatment; hospital tr ment; medical appliances; optical tr ment; convalescent treatment.

The Society's invested funds amoun upwards of £8,000.

It is obvious that it is to the advant of all employees of architects and veyors coming within the scope of Health Insurance Act to belong t Society formed solely for their ben especially as it is now offering benefit a much higher scale than most o Approved societies.

The new Committee of Manageme as follows : Messrs. Lewis Solon F.R.I.B.A., chairman; H. D. Sea Wood, F.R.I.B.A., treasurer; Ge Corderoy, F.S.I.; W. Fagg; P. W. J mer; Alexander Goddard, O.B.E.; W Hamlyn, A.R.I.B.A.; G. N. Hann P.A.S.I.; John B. Hector, M.S.A.; R Mann, F.S.I.; C. McArthur But E. C. P. Monson, F.R.I.B.A.; and E Sadgrove, F.R.I.B.A. The trustees Messrs. Wm. Edgar Horne, M.P.; Da Watney, F.S.I.; and E. J. Sadgr F.R.I.B.A. The secretary is Mr. F. Yerbury, and the assistant secretary S. Double, F.F.I.

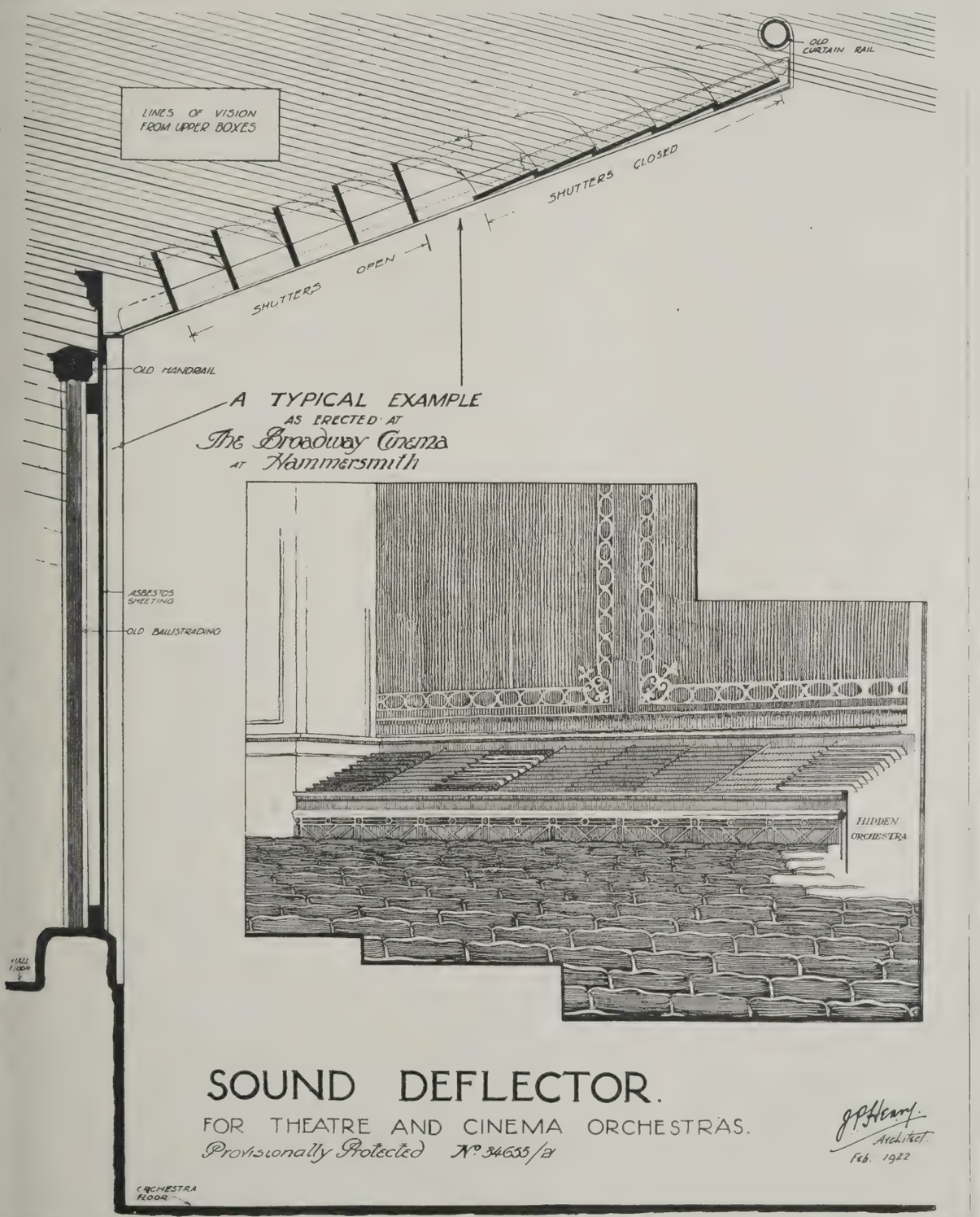
The total number of persons who h joined the Society since its formatio 2,525, and of these 746 have ceased t members, mainly owing to their ha passed out of the scope of the Nati Insurance Act. The following amo have been paid in benefits from 191 1920 : Sickness benefit, £1,350 13s. 1 disablement benefit, £314 12s. maternity benefit, £373 10s.; subscrip to hospital and specialist's fees, £6 16s The funds invested by the Society December 31, 1920, totalled £7,553 0s

Sound Deflector
r Theatre Orchestras

illustrate below an ingenious tra screen and sound deflector, has been erected in the Broadway a, Hammersmith, from the designs J. P. Henry, of Putney, architect. reen completely hides the orchestra rchestra lighting, and the sound or has been devised to render the music bright and crisp, and to deflect delicate passages into any part of the hall. Any section of the shuttering can be speedily operated from a central position by the conductor, who by using his hands or feet on one or a multiple of actions may bring out particular instruments. Thus the strings may be opened out and the brasses subdued, etc.

The increased effectiveness of the orchestra to be obtained from the installation of the deflector has been estimated by a conductor at from 50 to 80 per cent. The screen and deflector is constructed of fire-resisting material, and has the approval of the London County Council.

The installation illustrated was erected between twelve o'clock midnight and noon the following day, the general work being carried out by Mr. J. Coop Edmunds, of Hammersmith, and the gearing by Messrs. Robert Adams, of Holborn.



DESIGNED BY J. P. HENRY, ARCHITECT

The Theatre and Civic Life

Mr. Barry Jackson, proprietor of the Repertory Theatre, Birmingham, and this year's gold medallist of the Birmingham Civic Society, recently gave an extremely interesting address to the Society on "The Theatre and Civic Life." He said that the earliest concrete form of drama was found in the Greek civilization. In that country it was entirely religious, and consequently presented before the masses with due solemnity and every dignity. The plays were performed upon sacred ground, and in their action vividly showed the spectators, which were numbered by thousands, what ideals man should strive to attain.

A standard for the plays was set up by the State, which appointed judges in order that only great works should be given. Roughly, the system under which the drama rose to such amazing heights was this : a prize was offered by the State to any community for the finest dramatic work. A leader of this community commissioned and paid from his own pocket both poet and players. The judges having made their selection, the reward was the public performance in Athens at one of the great religious festivals, and crowns of ivy for all concerned. In addition, the leader of the winning community was allowed to erect a monument in the vicinity of the theatre at his own expense.

Thus they found the State drawing the very best from the individual with the minimum of expense to itself. They must always remember that the cornerstone of the Greek drama was its religious character, a character which ensured the greatest seriousness and earnestness of mind from the masses. The motive underlying the whole was the deepest known to mankind, and in direct consequence it received the most noble expressions in honour.

Greek and Roman

The Roman Theatre was founded in imitation of the Greek, but without its religious motive. The performances were arranged by some individual who chose that method of entertaining upon a huge scale, or given by some troupe of actors to make a living, and the standard fell and fell until at last the drama collapsed in a chaos of obscenities. Christianity drove its stake through this antique spectre, and ancient dramatic art ended its existence with a hideous lascivious grimace. When the drama reappeared it was at a nunnery in Germany, and religion again was the motive.

The space of time between these religious plays and the Elizabethan drama was amazingly brief. Up to the period of Elizabeth, neither the State nor the Sovereign gave much encouragement to the stage. They had direct knowledge that Elizabeth gave her patronage to the players, and also that some of her nobles had companies of their own. If by some chance order and system had prevailed in our theatre at that time, its position to-day might have been very different. The reigning monarchs and the great houses patronized it, and the public took it to their hearts. If England as a nation did much for the drama in so casual a fashion it was in no casual manner that the Lords and Commons in Parliament assembled on September 2, 1642, determined to crush it out of all existence. That was the death-blow of the theatres and dramatic art of the Shakespearean period.

At the Restoration of the monarchy the theatres came into being once more, but as a result of the bigotry with which they had been persecuted, the plays, though in many cases of extraordinary literary merit, were too gross and indelicate for modern ears.

And so from that period they had muddled through, the State taking no interest whatsoever in the drama beyond appointing an official whose business it was to see that :

"No profanity or impropriety of language be permitted on the stage.

"No indecency of dress, dance, or gesture be permitted on the stage.

"No offensive personalities or representations of living persons be permitted on the stage, nor anything calculated to produce riot or breach of the peace."

England and the Theatre

Ours was practically the only civilized nation at the present time which did not make some endeavour to help, to guide the great audiences which flocked daily to the theatres. In France the theatre took much the same course as with us, but the patronage of the monarch on more than one occasion was infinitely more marked. In the midst of the turbulent days of the Revolution they found an order from the new Government in direct antithesis of our Puritanical party, actually giving directions to the theatres as to what plays were to be given and subsidizing them for the purpose. Those subsidies were made to the present day. In Germany the same methods obtained.

It was essential to realize firmly that the theatre was a vital need of the masses. In England to-day they had no one to guide, no one to help. The theatre was exploited, like everything else, in the mad race for the accumulation of wealth. On the other hand, there was a minority who, realizing the importance of the drama, were constantly trying to raise a voice in the wilderness.

No hard and fast lines could be set down for any betterment of the theatre. The drama had for some time been absolutely dependent upon London. Any talented artists, whatever their calling, felt themselves drawn towards that wilderness of humanity as if its streets really were paved with gold.

Pride in the Provinces

Our provincial cities must take a pride in their artists, and use every endeavour to induce those who had gone out into the world to return and work in their native city, to help them in their efforts, and to learn from them. Not to drive them away by apathy and by inattention. On those lines it seemed that the Civic Society could accomplish much. Their endeavour to make their city beautiful need not be confined to outward memorials, material forms and shapes, admirable as such work was. They must attempt by every means in their power to strike deep down to what was after all the fundamental base—the mentality of the individual.

If the theatre was ever going to play a serious part in civic life it would have to be definitely acknowledged and protec by the leaders of the community. nation that still required the assista of an official whose sole business was see that parents sent their children school to be educated would certai not rise up and demand a living thea for many generations. It was the sole duty of every citizen in any commun to see that his neighbour did not go want of bodily sustenance; that acco plished, it was his next duty to attend the nourishment of the mind, and th was no means so vigorous, so healthy the theatre.

Law Report

Croydon Builder's Speculati

Tully v. Brockley.

Feb. 14. Official Referee's Court.
Before Sir Francis Newbolt.

Sir F. Newbolt, in giving judgment this case, which had occupied three da took occasion to comment upon t enormous disproportion of the cost to t amount in dispute and the sum ultimat recovered.

The plaintiff in the action was M John Tully, builder, of 5 Gladstone Roa Croydon, and the defendant Mrs. Eli beth Brockley, of Church Street, Croydo a lady who speculated in building, a the claim was for balance of account building two four-roomed bungalows Carshalton. Towards the close of t hearing the Referee asked the leg representatives of the litigants to furni him with an approximate idea of the co before he delivered a reserved judgme and it was the facts disclosed by th approximate statements which led to observations relative to the unfortuna position of both parties.

In the course of his judgment S Francis said that in 1920 the defenda a married woman and a general deal was tempted by the offer of a Gover ment subsidy to embark upon a specu tion which promised a substantial pro She had a small plot of waste grou bringing in £3 a year, and she engag the plaintiff, a builder of cheap houses, erect complete within the time specifi in the Government offer two four-room semi-detached bungalows at the price £550 each. After two or three small pa ments on account the defendant found s could not go on without raising mon on mortgage, and she employed plaint to find a lender of £1,000. The plaint succeeded, but defendant refused to p him anything for his services. The hous were ultimately completed, and a su sidy of £460 obtained from the Gover ment. But when the time came f settlement serious differences arose numerous questions relating to t charges, resulting in the present actic Commenting upon the length of tir occupied by the hearing, Sir Francis sa that from a rough estimate of the co given to him by the solicitors it appear that the plaintiff's costs would amou to about £497, and those of the defenda to about £400. In the result he ga judgment for the plaintiff for £27, a ordered each party to pay their own cos Such a case as this, added the Refere must "shock the public conscience."

Enquiries Answered

Pitch of Roof for Plain Tiling.

P. writes: "I am desirous of tiling of 30 deg. pitch with plain tiles, but informed it is not advisable to do so. uld be glad to know if this is correct, so, why slates can be used at 30 deg. and not tiles?"

pitch of 30 deg. is too low for plain , but is quite normal for slating of ary size.

G.

Architects' Fees for Villas.

I. writes: "Plans and specifications prepared for a villa, and a contract unting to £1,350 was entered into. completion another villa was ed, exactly the same in design, but plans and specifications were pre- and another contract amounting to o was entered into. Subsequently and specifications were prepared a contract entered into to construct more villas of a different design for o each. What are the architect's fees? No arrangement was made. rvision of the whole of the buildings been made during the construction."

r the first villa the full scale of es holds good; for the second only repeat charges" are payable; for the four I suggest one pair (or one villa, e case may be) should be paid for in and the remainder as repetition only.

F. S. I.

Rebuilding of Party Wall.

"Puzzled" writes: "What right has an r of a shop desiring to rebuild with d to the party walls? The premises utside the area of the Building Act. wall on one side is very much out of r, but the adjoining owner disputes necessity of rebuilding. Can you me to any authority?"

the dividing wall of two properties ully of a "party" character, then each is responsible for one half the cost aintenance; but it does not at all w that if one party wishes to rebuild wall, for his own purposes, he can upon his neighbour to bear any part e expense. Further, he must be very ul that no injury is done to the bouring property by reason of his ations. I advise that plans should prepared and submitted to the ad- ng owner before anything is done.

F. S. I.

Surface Area of Elliptical Domes.

writes: "Can you give me a simple ula for calculating the following rficial areas: 1. Area of dome circular plan and semi-elliptical in section; rea of dome circular on plan and ent of ellipse in section; 3. area of e elliptical on plan and semi-elliptical ction; 4. area of dome elliptical on and segment of ellipse in section?"

uestions on the ellipse are among the t difficult ones occurring in mensura- . Although it is a very simple curve ng many well-known properties, it is possible to obtain accurately such an nary requirement as the length of its mference. Approximations may be ined sufficient for most practical pur- s, but the greater the accuracy required the more complicated is the formula. For example, to get within 0.1 per cent., the formula for circumference is

$$\pi d + 2(D-d) - \frac{d(D-d)}{\sqrt{[(D+d)\ (D+2d)]}}$$

Of the four solutions asked for with regard to domes only one can be stated within reasonable limits. It is the surface of a dome circular in plan and semi-elliptical in section. Let a equal radius of base, b equal height of semi-ellipse, then by the theorem of Guldinus or Pappus: "If a line BCA be revolved about any axis OB, the area of surface swept out by the revolution of the line is the product of the length of the line and the path traced out by the c.g. of the line." The resulting formula for the surface is

$$S = \pi ab\left[\frac{a}{b} + \frac{b}{\sqrt{(a^2-b^2)}}\log_e\frac{a+\sqrt{a^2-b^2}}{b}\right]$$

HENRY ADAMS.

Combined Equations.

H.F. writes: "What steps have to be taken to get out the derived form of the combined equation (Resistance Moments) as given in W.N. Twelvetrees's 'A Treatise on Reinforced Concrete'?

Combined equation:—$m.\frac{c}{t} = \frac{n_1}{(1-n_1)}$ (as given at bottom of page 125).

Derived equation:—$n_1 = \frac{1}{1+(t/m.c)}$ (as given at top of page 126)"

—The answer is as follows:—

Equation (bottom of page 125).

$$m.\frac{c}{t} = \frac{n_1}{(1-n_1)}$$

$$\text{or } \frac{n_1}{(1-n_1)} = m.\frac{c}{t}$$

$$\therefore \frac{1-n_1}{n_1} = \frac{t}{m.c}$$

$$\frac{1}{n_1} - 1 = \frac{t}{m.c}$$

$$\frac{1}{n_1} = 1 + \frac{t}{m.c}$$

Equation (3) (page 126).

$$n_1 = \frac{1}{1+(t/m.c)}$$

Preservation of Limestone.

T. F. writes: "We have in Malta a porous globigerina limestone which, under certain circumstances, is disintegrated by the atmospheric agencies. As I am anxious to preserve some megalithic monuments, I should like to know (1) of an efficient and possibly cheap transparent substance to spray the stones with, and (2) of the people who could supply it."

—For small objects preserved in a museum a satisfactory method of consolidating and preserving is to first ensure that the object is thoroughly dry, and then spray it with a solution of ceresine wax in toluene. This can easily be prepared by melting, say, two ounces of wax and adding about one pint of toluene. It is best to proceed by pouring the melted wax into a lever-top tin, adding a little of the toluene and shaking up (after putting on the lid), then adding more toluene and repeating the operation until the solution does not thicken on cooling. A wax solution of similar nature can be obtained under the name of Browning's Solution from the Indestructible Paint Co., King's House, King Street, E.C.2. For the preservation of large monuments exposed to the weather, spraying with a solution of resins in China Wood Oil is preferable. Such a solution can be obtained under the name of "Toxloxpore" from the Protective Products Co., 74 Vicarage Lane, Stratford, E.15. For use for this purpose it should be diluted with an equal volume of petroleum spirit.

N. H.

The London House Builders' Association

According to the last annual report of the Council the work of the London House Builders' Association in the coming year will be of the greatest importance. The outstanding requirement of the trade is to obtain greater financial facilities for purchasers of single houses, and the development of the Building Society principle through existing societies or through the means of the Small Dwellings Acquisition Act will form one of the great objects of the Association. The report states: there is a wide demand for a house by the person who has £100 to £200 of ready capital, and the Council hope that it will be possible during the coming year for members to supply this demand. To accomplish this the strictest economy in all costs must be observed. The revised building regulations which the Ministry of Health has issued for use in connection with the Government Housing Schemes are very much more economical than the old regulations of the London Building Act, 1894.

A greater measure of publicity, it is stated, should be given to the work of the members in the past. Many schemes of private builders are examples of good and efficient housing which might have formed a model for the Government's efforts with great benefit to the country, and it will be the aim of the Association to obtain due recognition of such schemes.

With regard to housing generally the report states: a permanently different standard of values in building from those of pre-war days will have to be accepted, and the whole scale of rents must be altered in accordance with the post-war position. When this is recognized by the people at large, we shall be approaching post-war normal conditions, and economic housing may be expected by the trade and the country. The Council protests against the repeated prophecies of a further great slump in building costs so far as it is applicable to private enterprise; this policy is but a continuation of the pernicious campaign that has misled the public into expectations of housing conditions which are against all economic laws. The people require houses to live in without delay, and these can only be built by the re-habilitation of private enterprise.

Publication Received

The "Practical Engineer" Mechanical Pocket Book and Diary, 1922 (with Buyers' Guide in French, Spanish, and Russian). Thirty-fourth year of issue. Net price, cloth 2s.; best cloth 2s. 6d. The Technical Publishing Company, Ltd., 1 Gough Square, Fleet Street, London, E.C.

The Week's News

Reconstruction of Ramsgate Pier.

Ramsgate pier, damaged by fire and gale, is to be reconstructed at a cost of £12,000.

Pickering Memorial Hall.

The new Memorial Hall will soon be completed. It is expected that the opening ceremony will be performed in April.

Beverley Sewerage Works.

Application has been made by the T.C. for a loan of £25,000 for new sewerage works.

New West End Picture Palace.

A picture theatre to hold 900 people is to be constructed in St. Peter's Chapel of Ease, off Buckingham Palace Road.

Bournemouth Housing Costs.

The average cost of building each house in Bournemouth's first instalment of the Housing Scheme was £977.

Knaresborough Road Improvements.

It is proposed to widen High Bridge Street, Knaresborough, to carry out extensive drainage schemes, and to rebuild the George Hotel.

Princess Mary's Yorkshire Home.

Mr. Sydney D. Kitson, M.A., F.R.I.B.A., of Leeds, has been commissioned to renovate Goldsborough Hall, Yorkshire, for Princess Mary and Viscount Lascelles.

French Factory for Dunfermline.

A French firm of manufacturers are to erect a large factory at Townhill, Dunfermline, for the making of asbestos sheets and slates.

Fire at Hammersmith.

Damage estimated at several thousands of pounds has been done by fire at the premises of Messrs. James Hunt & Co., drapers and house furnishers, of 52 King Street, Hammersmith.

American Army Headquarters.

A bronze tablet, designed by Sir Edwin Lutyens, was unveiled on February 13, at the Belgravia Hotel, S.W., to mark the headquarters in Great Britain of the United States Army during the war.

An Estate for Greenwich Hospital.

The Admiralty has received as a gift for the benefit of Greenwich Hospital the Holbrook Estate, Suffolk, of some 1,000 acres in extent, and of the estimated value of £30,000.

Lectures to South Wales Architects.

Two lectures have been given under the auspices of the South Wales Institute of Architects. The first was that by Professor W. S. Purchon, M.A., A.R.I.B.A., head of the School of Architecture, who spoke on "The French Achievement in Architecture," and the second by Mr. E. J. Elford, M.Inst.C.E., city engineer of Cardiff, on "Town Planning, with Special Reference to Cardiff."

Auckland War Memorial Competition.

The "Answers to Questions" relating to the Auckland War Memorial Competition have been received by the R.I.B.A. from New Zealand. Duplicated copies can be obtained by competitors on application to the Secretary, R.I.B.A.

Higher London Buildings.

Higher buildings are recommended by the L.C.C. Building Acts Committee, which suggests sanctioning 80 ft. instead of 60 ft. buildings. This means, practically, the addition of another storey.

Chinese and Japanese Iron.

The annual production of pig-iron in China from Chinese furnaces is estimated to be about 450,000 tons, while that from Japanese furnaces is estimated to be about 250,000 tons.

Scarborough Promenade Extension.

The T.C. have received the sanction of the Ministry of Health to a loan of £5,000 for the north promenade extension scheme and £4,500 for making good the land-slip at Holbeck.

War Memorial for Scarborough.

It is proposed to erect an obelisk of Portland stone on Oliver's Mount, Scarborough, as a war memorial. The scheme which includes the construction of steps, and paths, is estimated to cost between £7,000 and £8,000.

Central Library for Students.

The Central Library for Students has taken new premises in Galen Place, near the British Museum. In its new home the Central Library finds ample accommodation, and the arrangement of the books has been most perfectly planned.

High Wycombe Works Extension,

Messrs. Thomas Glenister, Ltd., of Temple Chair and Upholstery Works, High Wycombe, are enlarging their works. The work will be executed in three contracts, the first of which has been let.

Royal Sanitary Institute Congress.

Messrs. H. D. Searles-Wood, vice-president of the R.I.B.A., and J. Arthur Smith, F.R.I.B.A., have been appointed to represent the R.I.B.A. at the Royal Sanitary Institute Congress to be held at Bournemouth from July 24 to 29.

New Secondary School for Bournemouth.

Bournemouth Corporation have decided to apply to the Ministry of Health for sanction to a loan of £7,636 10s. to cover the cost of purchasing and altering "Woodcote" as a secondary school for girls.

Institute of Scottish Architects.

The petition of Alexander N. Paterson, President of the Institute of Scottish Architects, and others, for a grant of a Charter of Incorporation to a body to be named "The Incorporation of Architects in Scotland," is before a committee of the Lords of the Council.

New Partnership.

Mr. S. H. White (late A. T. Walmisley and White), civil. engineer, of 9 Victoria Street, S.W., has taken into partnership his son, Mr. L. A. White. The business, which has been established over half a century, will be carried on under the style of S. H. White and Son.

Proposed New Hospital for Malton.

The inhabitants of Malton and Nort are considering the building of a n hospital to commemorate the wedding Princess Mary. At Malton it is propo to build a new cinema and palace varieties upon a site which has been p chased in Church Street.

Kirkcaldy War Memorial.

The following awards have been ma in the Kirkcaldy war memorial compe tion: first (£50), Mr. John S. Mack A.I.S.A., Glasgow; second (£30), M Jas. M. Honeyman, A.R.I.B.A., Glasgo third (£20), Mr. William Williams L.R.I.B.A., Kirkcaldy.

Forthcoming Exhibition.

During the whole of March there w be on view at the Brook Street Gallery, 14 Brook Street, New Bo Street, London, W., an exhibition sketches in the East and other work Stella Langdale, and oil paintings, et ings, and drawings by E. Hesketh Hu bard, R.O.I., A.R.W.A.

New Architect for the N.E.R.

Mr. Stephen Wilkinson, A.F. F.R.I.B.A., who has been appointed arc tect to the North-Eastern Railway, signed the proposed terminus and ho for the Eastern Bengal State Railway Calcutta. Mr. Wilkinson is vice-pre dent of the York and East Yorksh Architectural Society.

Society of Architects.

The Council of the Society of Arc tects invite offers of or suggestions papers on questions of professional terest for the forthcoming session. T invitation is not confined to members the Society, and is extended to members of allied arts, crafts, scienc and industries. The meetings are h at 8 p.m., at the society's headquarte 28 Bedford Square, W.C.1, on the secc Thursday in the month.

London's New Sporting Club.

The old Stadium in High Holborn being transformed into a social club all men interested in sport, with lunch and dining accommodation for from to 500 persons, three buffet bars, and billiard tables. Results of all sport and athletic fixtures will be shown o huge publicity board, and on a spec electrically controlled board will be sho all the runners and jockeys, results, sta ing prices, and fluctuations of the c pari-mutuel every minute.

Electric Power Station for Torquay.

Torquay and Newton Abbot ha arrived at an agreement for a combi electric lighting system, and the Torqu Town Council is to take the necessa steps to obtain powers to borrow necessary money for the erection of a n generating station at Newton Abb The cost of the scheme is estimated between £175,000 and £200,000.

The Town Council has also decided to c struct two wide promenades at the To Abbey Meadows, one near the ten courts and another close to the sea fro at a cost of £1,000.

ees to District Surveyors: New Phase Explained

By G. FLINT CLARKSON, A.R.I.B.A.

HE quick calculation of fees payable to district surveyors has been rendered still more difficult by the t increases. It is to be hoped that Bill contemplated, and referred to, ib-section 7 of section 26 of the on County Council (General Powers) 1921, which section authorizes the t increases, will consolidate all these n one easily comprehended schedule, that the innovation made in sub- on 4 of "appropriate" fees for some ations will form a permanent feature e new schedule, possibly slightly d in accordance with the cost of ing.

present the fees payable to district yors are stated in no less than six ent by-laws or Acts. The earliest ws, for foundations and walls, which issued in 1891 under section 16 of Metropolis Management and Building Amendment Act 1878, laid down a f 5s. per building or addition to a ing; and those issued, at the same under section 31 of the London cil (General Powers) Act 1890 for ering and excavations within 3 ft. e building laid down a further fee of per building or addition. Section f the L.B.A. 1894, while repeating cts under which these by-laws were , perpetuated the by-laws themselves. Under the Act of last year, and powers given to the Council under on 26 (2), which have been exercised ll, these fees are now 7s. 6d. each.

e main provisions as to fees are those d in the Third Schedule of the Lon- Building Act 1894, which are based ly on the area and number of stories e building, with specified fees for in special services in addition. But to these have been added additional fees computed in a similar manner under the Second Schedule of the L.B.A. (Amendment Act) 1905, where work is involved under that Act, which dealt mainly with protection against fire in various classes of building and shops. Incidentally this schedule also introduced a minimum fee for these services where the scale fee would be unremunerative. Under section 26 of the L.C.C. (General Powers) Act 1909 a fee on the same basis as the schedule in the 1894 Act, but two and a half times the amount, was substitute in the case of steel-framed buildings, with the proviso that additions were to be considered as new buildings of the size of the addition in place of the former method of assessment, and that 20 per cent. of the fees should be paid when notice was given. Last year's Act increased all these fees by 25 per cent., and gave the County Council power to increase them up to another 25 per cent. on the 1894 scale, which power they exercised immediately the Act came into force on October 1, 1921.

Ever since the Act of 1894, the provisions as to fees on "additions, alterations, and other works" have given trouble, because on small alterations such as are constantly being made in all large business premises the scale fee is out of proportion to the value of the work, and thus it became the universal custom for a district surveyor to abate the fee to bring his remuneration in conformity with the service rendered. On such a basis the element of uncertainty was always present, and especially on small alterations it made estimating very difficult. For the first time last year's Act has taken cognizance of this difficulty, and includes a schedule of maximum fees as follows under section 26 (4) (*a*) :—

Cost. £	Fee. £ s. d.
25	1 1 0
50	2 2 0
75	3 3 0
100	4 4 0
200	5 5 0
300	6 6 0
400	7 7 0
500	8 8 0

This fee is to cover all the services for which fees are payable under Part 1 of the Third Schedule of the L.B.A. 1894. Although the Act does not expressly state so, the obvious intention is that if the scale fee is less than the fee included in this table it is to apply, but that by-law fees are additional to this table. To enable the fee to be assessed on this basis the obligation is laid on the builder to furnish the district surveyor, within fourteen days of the completion of the alteration, with the cost of the work, which is defined in section 26 (4) (*c*) as being "the total cost of and incidental to the addition, exclusive of any work for which a special or separate fee is provided by the said Acts."

On large buildings the fees always require a certain amount of calculation, but to those concerned with alterations to domestic property the accompanying table may be useful.

FEES TO DISTRICT SURVEYORS
FOR
ALTERATIONS & ADDITIONS

AREA THE WHOLE BLDG ISTING & ADDITION NOT EXCEEDING	NUMBER OF STORIES 1	2	3	4	5	6	7
	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d
400 F' SUPER.	11 3	1 2 6	1 6 3	1 10 0	1 13 9	1 17 6	2 1 3
500 " "	1 4 4½	1 4 4½	1 8 1½	1 11 10½	1 15 7½	1 19 4½	2 3 1½
600 " "	1 6 2	1 6 3	1 10 0	1 13 9	1 17 6	2 1 3	2 5 0
700 " "	1 8 1½	1 8 1½	1 11 10½	1 15 7½	1 19 4½	2 3 1½	2 6 10½
800 " "	1 10 0	1 10 0	1 13 9	1 17 6	2 1 3	2 5 0	2 8 9
900 " "	1 11 10½	1 11 10½	1 15 7½	1 19 4½	2 3 1½	2 6 10½	2 10 7½
1000 " "	1 13 9	1 13 9	1 17 6	2 1 3	2 5 0	2 8 9	2 12 6
1100 " "	1 15 7½	1 15 7½	1 19 4½	2 3 1½	2 6 10½	2 10 7½	2 14 4½
1200 " "	1 17 6	1 17 6	2 1 3	2 5 0	2 8 9	2 12 6	2 16 3

THE FEES FOR NEW BUILDINGS ARE DOUBLE THOSE GIVEN IN THE TABLE
IN ADDITION TO THE ABOVE BYELAW FEES OF 15/- WILL BE INCURRED.
IF THE PROVISIONS OF THE 1905 AMENDMENT ACT APPLY THE ABOVE FEES WILL BE INCREASED BY 40% OF THE ABOVE FIGURE.
[THE ADDITIONAL FEE FOR NEW BUILDINGS IS THE SAME AMOUNT AS FOR ALTERATIONS] OR A FEE OF £1-11-6 WHICHEVER IS THE GREATER

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE

Housing Progress.

Sir Alfred Mond, Minister of Health, replying to a number of questions in the House of Commons, said that the total number of houses completed by local authorities and private builders under schemes of financial assistance up to January 1 was 102,480. In addition, 3,150 other dwellings had been provided by the conversion of houses into flats, or by the conversion of huts and hostels. The number of houses in course of erection was 85,892, and the number not yet started 29,778. The lowest prices approved for houses recently had been £433 for a non-parlour house with two bedrooms, £450 for a non-parlour house with three bedrooms, and £500 for a parlour house. In present circumstances the Government could not undertake to extend financial assistance to housing schemes beyond the limits announced last session.

The Government certainly intended to proceed with the housing scheme within the limits laid down last session. Where work had been undertaken by local authorities with the approval of the Ministry, and for reasons outside the control of the authorities could not be completed by next July, the time for completion would be extended by the Ministry as might be necessary.

In answer to Mr. Hales, Sir Alfred Mond said that he could not undertake to introduce legislation to compel owners to let houses which were being kept empty indefinitely on offer for sale, or to compel the owners to pay rates for the same during the whole period that they were unoccupied

Art Exhibitions

Paintings by William Shackleton

Let me, in this instance, turn about one of Lucretius's epigrams—or is it one of the Eleatics?—and suggest that what is to some particularly sweet, may seem to others sad and bitter. . . Most probably, Mr. Shackleton, than whom no more convinced artist could scarcely be found, thinks his works sweet in the best sense of the word, and sweet they may well be in their psycho-mysticism; but as you go round the exhibition of his oil-paintings at the Leicester Galleries, you see how his penchant for fixing on canvas the possibly correct but certainly obscure yearnings of his metaphysical soul has strangled life out of his art.

Here is a distinct subordination of the artistic to the speculative mind, with attendant nugatory results. To be sure, Mr. Shackleton commands a pretty facility of execution, but to admit more would be insincere and wrong. The trouble is that this facility of technique has not evolved further; it has just remained stagnant ever since 1913, the year when his more ambitious and set works show first signs of completeness, so that the few formulæ he then discovered he faithfully adheres to, such as stippling the surrounding motifs: trees, clouds, or garments. How little related it all seems to vital art, such as even Picasso's, with its endless and keen experiments! Sincerity, however coruscating, is better than genteel vapidity.

I readily grant Mr. Shackleton a sense of colour—of a sort, especially in the "Polar Star" (4) and the "City of the Golden Gates" (11), with its sheen of blue, grey, and green. Many titles in the catalogue are accompanied by explanatory legends. Under this very "City of the Golden Gates," you read about the "impermanence of human achievement—Mermaids are scattering the gold and crowning the broken statue of the skeleton sculptor. The vanity of fame. Phosphorescent fish illuminate the scene of desolation." And these added touches point the way to both the strength and weakness of his art.

His happiest works are three water-colours: "Malham and Airedale" (19), "Gordale" (20), and "Gordale Scar" (21), all reminiscent of Turner when still young; surely an indication of Mr. Shackleton's ability to convey an approximate feeling of unsoiled nature, and no more.

G. HOLT.

The Senefelder Club

What a beautiful art lies within the possibilities of lithography, and how value-laden it can be to the world at large, is made abundantly clear at the twelfth exhibition of the Senefelder Club now held at the Leicester Galleries.

There is no need to harp upon the influence which this association of earnest artists exercises over a vast and increasing public; one has only to compare the average lithograph of fifteen years ago, especially in England, with the average lithograph of to-day, to realize a splendid discrepancy, and the main honour for this wonted improvement is due to the Senefelder Club, which, with the aid of set limitations in the number of prints allowed, has encouraged the turning-out of honest as well as able lithographs to be gotten for a small sum of money. Here, for instance, the price of an average unframed print is about three guineas, a figure which does bring a good drawing within the reach of all but grossly inflated and grossly depleted purses, and one should be thankful for such welcome moderateness. There are some 118 prints, of which we will nominate the ablest.

"Horn Dealers" (7), by Robert Bevan, seen last year at the Friday Club; great sincerity of tone and a fine, taut design. "Femme nue sur un tabouret" (14), by Jean Weber; reminds one of those ironical and mellow drawings for "Le Rire." "Churchyard of St. Giles-in-the-Fields" (33), by H. D. Waley, a coloured print, small and charming, in the candid Camden Town school manner. "The Fall of Man" (41) and "Eve" (42), by F. Ernest Jackson; two of the very best exhibits. At once one observes how the backgrounds of significant shapes support those beautiful nude bodies; there is a chaste yet almost abandoned lusciousness about the "Eve" which lingers awhile. Who could deny to the two dynamic figures of John Copley's "Lacrosse" (46) a life of intense energy? Here, the effect is heightened by a curious and loose kind of chiaroscuro.

For subtle patterns, for pictorial elements pruned of unessentials and quickly brought together, and for telling colour-spots, go to Vieillard. His "Au Café" (54), "La Rue" (57), and "Intérieur" (59), show one of the most winsome ways of committing to paper clean-cut emotions. Do not overlook the very last exhibit, for it is one of the most successful—A. S. Hartrick's "Saxon Tower at Deerhurst" (118), with its unequivocal reticence of details and of technical tricks.

But the very "clou" of this excellent collection is "Le Moulin" (71), by Vlaminck. This is indeed tremendous charcoal work, and it simply and forcibly betrays a mind attuned to vast pantheistic harmonies—water, skies, mill, trees, and more trees and more skies, all done in an impatient gesture of utter sincerity, with a fair deal of petulancy and immense insight.

G. HOLT.

Reigate Dungeon Discovered

While digging the foundations for a garage at Reigate the workmen discovered a thirteenth-century crypt or dungeon. The site on which the discovery was made is referred to in a deed of 1588 as "The Owlde Market Place." This was formerly under the original Market House, which appears to have been demolished at the Reformation, when Henry VIII abolished the pilgrimages to the shrine of St. Thomas à Becket at Canterbury. A desecrated chapel of St. Thomas, in the centre of the town, was then used as a market house until it was pulled down and the present red-brick structure, lately presented to the corporation, was erected in 1708. At the recent sale of the greater part of Reigate Messrs. G. and R. Stannard purchased No. 16 West Street, a cot and a range of store sheds. They cided to build a garage near to a church wall, and it was here tha crypt was found. The vicar and local architects—Messrs. E. Penfold, Smith, and C. E. Salmon—have arrangements with Messrs. Stannar its preservation in its original state.

The Restoration of t Parthenon

With regard to the restoration o Parthenon the Athens corresponde "The Manchester Guardian" writes at present nothing more is proposed the re-erection in their position of columns on the north side (the sev eighth, and ninth columns). Sinc component parts of each of these col are, for the most part, in existence, re-erection will not be so difficult a m In addition, the architrave, as far can be replaced, will be placed on t the columns. When this much is ach the architects will be in a positi estimate to what extent further re tion is desirable or possible. The sca ing for this work is already in pos and the work has begun.

It is clear that the rebuilding of at least of the columns of the Partl will not be either impossible to achie when achieved, unpleasant to loo I am, however (writes the correspor filled with the gravest apprehension the success of the system which is posed for the replacement of the m parts of the nearly complete col Missing sections of columns are to placed with drums of coarse grey stone, while broken corners and su are to be repaired with plaster.

The great difficulty to be faced, ever, by any restoration architect case of the Parthenon is that he will be able to achieve quite the same eff the original architects, because whe Parthenon was built the column-d (with the exception of the capital were put in position before the flutin cut. Consequently when the colum up and the fluting cut the joints drums were almost imperceptible. will not be the case with the re columns. Their joints will show they will look unsightly in compa with the unfallen columns.

The public can, I think, have cor trust in the work of M. Balanos a assistants who are charged with restoration, provided that the w considered as experimental. The point to consider is that before 1687, the Acropolis was shelled by the Ve Morosini and the Parthenon ser damaged, the columns both on the and on the south sides were sta The result of the explosion in the thenon was to blow outwards the co on both these sides. Those on the side suffered most, while those o north fell with but little damage scattered column-drums. It is th preserved columns on this side th now to be put up, and when the w complete the Temple will, to a c extent, have regained the appeara had before 1687. There is, of cour question of rebuilding the roof.

A Note on Powellized Wood

By PROFESSOR G. S. BOULGER, F.L.S.,
Imperial Institute, London

HE process of preserving and seasoning wood named after its inventor, the late Mr. William l, is not yet well known in this ry, although it is in general use in f our colonies. I have been fully rsant with it for some time. It is mply a drying process, and one of hief recommendations is that it rces, protects against fungi, and is green wood in one operation with rapidity. Its principle is the imation of the wood by a heated arine solution, after which the moisture of the solution can be ly dried off in the open air, or by ial drying. For use in the tropics, nical is added as a protection against ttacks of termites—probably the virulent of all insect attacks upon

e wood is treated in open tanks, no ire being required for the impregnaf the wood, the main explanation of ccessful operation being, perhaps, ct—long familiar to chemists—that forms an admirable penetrating arrying substance. While the temure of the solution is being raised oisture and sap already in the wood pelled, and the saccharine matter is y carried in as the temperature but as the hot liquid reaches the or of the wood, any remaining albuids will be coagulated, fungoid germs sect pupæ will be killed, and comsterilization will thus be effected.

e liquid penetrates the wood longially, at first, no doubt, by resinor vessels, and beech, oak, ash, gany, walnut, pine, etc., are readily ssed. In woods such as spruce or n pine, in which there are few or no ls or resin passages, penetration rently takes place through the walls e tracheids, and there is probably—ast in some cases—a slight and slow verse penetration by way of the The preservative solution reaches centre of the wood speedily and letely.

e sugar does not fill the cells of the l, nor in most cases does it crystallize e interior, but appears to enter the en cell-walls and to remain in them ly in a colloid, and not in a labile . The wood being sterilized, the subent entrance of fungoid growth is ented by a dry surface, by the coagun of the albuminoids, and by the anical clogging of the cell walls. is not improbable that the solution penetrate the ultra-microscopic s between the particles of the cellu- walls. White-ants' attacks would ar to be hindered by the distastess of the chemical employed against ı.

the course of the processing it is d that small checks close up, and the -coloured solution of impure sugar lly employed darkens the colour and rings out the grain or figure in the l. As a general rule experiments ated that the weight of processed l showed no increase, but a decrease, the weight of the solution absorbed being offset by the weight of the sappy matter expelled.

For outdoor use, as for sleepers, it would seem that the processed wood stands well without any special drying, and even if laid down absolutely wet; but for building, internal work, furniture, painting, or varnishing it must, of course, be thoroughly dried. This can be done in a very short time, either in the open air or by the use of kiln-drying. The universal danger in kiln-drying, viz., case-hardening, is less in Powellized wood than in untreated wood, and Powellized wood does not need to remain so long in the kiln. The chances of case-hardening are lessened by the use of modern methods employing a steam-charged atmosphere drying from the centre of the wood outwards.

At the conclusion of the processing and drying, which together will seldom occupy three weeks, the wood is as thoroughly seasoned and as completely stable as it would be after years of air drying. This is obviously of immense importance when a sudden demand—as often happens—exceeds the available supply of seasoned wood of some particular kind, and may save the locking up for years of much of the timber merchant's capital in timber in process of seasoning.

It has also been found that the Powellized wood is less absorbent and requires less filler if painted or varnished. The process, while economizing paint, stain, or varnish (the wood being thoroughly sterilized), avoids any fear of the development of decay-fungi beneath the paint, as happens so often with wood supposed to be seasoned. The same thing is apparently true with regard to insect attack in the tropics upon the wood, when specially treated against white ants.

Obviously the greater stability and resistance to decay or insect attack bestowed upon woods by this process enables many inferior woods hitherto more or less useless to be put to higher uses. Some of the woods of the Indian jungle formerly of little use except as fuel can now be employed in building construction. The plant required for operating the process is simple and inexpensive. The process itself is natural, for it impregnates the wood with material of a composition akin to its own. It is not fool-proof (nor is kiln-drying), but the cost is reasonable, and in sugar-producing countries very small.

Editorial Note.

While welcoming the opportunity of publishing the foregoing article by Professor Boulger, F.L.S., on the Powell process of seasoning timber, we have requested a well-known architect contributor to add a few observations for the benefit of our readers. His comments are contained in the following paragraphs.

It appears from a careful perusal of Professor Boulger's article that the circumstances under which the solution is presented to the timber induce the wood fibres (from the surface to the core) to absorb the carbo-hydrates of the solution to their full capacity within a day, instead of their occupying—as in air seasoning—perhaps five, ten, or more years, in slowly absorbing the carbo-hydrates of the weaker natural sap remaining in the tree when felled; and that the subsequent operation of drying may be rapidly conducted in the open air, or accelerated by artificial means.

It is also evident that the Powell wood seasoning process is not only of commercial value to timber merchants and contractors who use timber on a large scale, but is one which has a direct interest for architects. And this because Powellized timber possesses several distinct advantages over wood which has been seasoned by ordinary means.

The most important of these, from the architect's point of view, are that the wood so treated does not rot, nor open at the joints after its conversion into joinery. The writer of these notes, having examined two small four-panelled oak doors made over eight years ago of identical design—one out of Powellized wood and the other from oak which had been seasoned in the usual way—found that while the former was perfectly true in all respects, the latter had open mitres and protruding tenons, a clear proof that the process stabilizes the material. Very severe tests have demonstrated that Powellized wood enabled glued joints to be made more nearly approaching a perfect condition than is the case with ordinarily dried wood.

Another point of hardly less moment in these days of high prices is that its use effects an appreciable saving in polishing and painting costs, because, the interstices being filled, its porosity is very much diminished, and there is, consequently, less absorption.

Joinery woods subjected to this treatment not only exhibit an enhanced beauty of figure, and a generally improved appearance, but are found to be more easily worked and carved than air-dried timber.

For work required in a great hurry it is a distinct gain to the architect to know that green timber can be perfectly seasoned in the course of a few weeks. In cases, for example, where large contracts have been entered into for the quick delivery of furniture, for which seasoned timber was not available, timber from freshly cut trees was seasoned by the Powell process in a day, dried in another twelve, and the finished product ready for dispatch within a month from the time the material entered the processing tank.

It is interesting to record that the late Mr. Powell—the inventor of the process—was a sugar refiner, and was induced to turn his attention to the subject by observing that the wooden vats which he used never seemed to need repair. The writer is indebted to Mr. John W. Kitchin, the Chairman of the Powell Wood Process Syndicate, of Salisbury House, E.C.2, for the opportunity of inspecting the processing plant at Messrs. Birch's works at High Wycombe.

The Uneconomy of High Taxation

The following letter has been forwarded to Sir Robert Horne by Col. O. C. Armstrong, the President of the Federation of British Industries. The mass of evidence collected from the chief industrial centres of England, Scotland, and Wales, points to the fact that the present burden of taxation is crippling the efforts of manufacturers to recover and extend their foreign markets, and is stifling the possibility of a trade revival, which is so urgent if an alleviation of the present unemployment position is to be achieved. The Federation feel it their duty to warn the Government of the certain consequences that will result if taxation on industry is maintained at its present high level, and are pressing the Chancellor of the Exchequer for a reduction of the Income Tax and the abolition of the Corporation Profits Tax.

To The Rt. Hon. Sir Robert S. Horne,
G.B.E., K.C., M.P.,
The Treasury, Whitehall, S.W.1.

SIR,—The Federation of British Industries has just concluded its annual investigation into the effects of the past year's taxation, and the views of Industry as to the future. In the course of this investigation general meetings were held at Sheffield, Nottingham, Bristol, Swansea, Leicester, Dundee, Edinburgh, Glasgow, Newcastle, Northampton, Birmingham, Liverpool, Manchester, Bradford, and Leeds, at which unanimous resolutions in the most emphatic terms were passed demanding the abolition of the Corporation Profits Tax and an immediate and substantial reduction in the rate of the Income Tax.

The fall of prices and values during the past year has been unprecedented, both in extent and rapidity, with the result that the effects of taxation have been felt by Industry with peculiar severity.

The capital resources of many industries have already been strained to the utmost by the need for larger working capital to meet post-war conditions of production, and the operations of the Excess Profits Duty have prevented the accumulation of reserves sufficient to meet so serious a crisis, while enormous local taxation and the Corporation Profits Tax still further depleted the available resources of Industry during the year.

Under these circumstances the burden of Income Tax at a high rate, assessed upon the average of the three years which included the greatest industrial boom in history, has assumed crushing proportions, and many firms have already been driven to impair their future productive capacity by paying the current year's taxation out of capital or by loan.

It is fully realized that high taxation has only been one among the many contributory causes of the present depression. It is, however, the only one of these causes which can be mitigated promptly by the independent action of His Majesty's Government.

The chaotic condition of the exchanges, the adverse financial and political conditions prevailing in many of our principal markets, and the general disorganization of the world's commercial system, are all susceptible of remedy; but the remedy will take time, and most of these factors will still be in operation to restrict trade and hamper production during the forthcoming year.

Under these circumstances it was the unanimous opinion of the district general meetings that any attempt to maintain taxation at its present level during the forthcoming year must at best seriously retard any industrial recovery, and at the worst may involve a permanent diminution in the productive capacity of the country.

The evidence brought forward at these meetings by speakers from all industries showed that the present rate of taxation is stifling initiative, postponing development, and crippling the efforts of manufacturers to recover and extend the foreign markets which are now of such vital importance to the welfare of the country.

The Federation warned the Government last year that Industry anticipated the most serious results from a continuance of high taxation. The meetings of this year afford overwhelming evidence that this warning was fully justified, and have disclosed the gravest alarm as to the future if the present level of taxation is maintained.

The Federation desire to urge you most earnestly to consider the grave danger to the economic position of the country which will be involved by disregarding this warning a second time, and to realize that the question is not now one of mere hardship or even of possible disaster to individual firms, but whether the whole industrial system of the country can possibly withstand any prolongation of the strain to which it has been subjected.

They feel that it is outside their province to suggest to you the means by which a sufficient reduction of taxation could be rendered possible. They wish, however, to place on record their conviction that under the present circumstances Government activities must be reduced substantially below their pre-war level. They are fully aware that such a reduction will involve the sacrifice of many activities admirable in themselves and valuable to the country, but it is in their opinion better to face these sacrifices now when so doing may avert still more serious consequences, than to postpone them to a future date when the ruin of Industry and a dwindling revenue will force them upon the country.

They trust that the committee which has been sitting under the chairmanship of Sir Eric Geddes have been able to suggest to you economies sufficient to enable the necessary reduction in taxation to be effected immediately, since they are convinced that such a reduction would have a psychological effect, both at home and abroad, which would be of the utmost value at the present moment in restoring confidence and enterprise, and, indeed, might of itself alone provide a sufficient stimulus to start the revival of trade which is so urgently needed.

They are firmly convinced that a substantial reduction of taxation would in a short time so increase the general volume of trade as to yield a larger revenue than could possibly be hoped from its maintenance at a higher level.

The Federation feel that they would fail in their duty as the responsible and representative organization of Industry in this country if they did not use th utmost endeavours to impress upon y and upon His Majesty's Governme their firm conviction that any step, ho ever bold, is preferable to the certa consequences of the maintenance taxation at its present level.

I am, Sir,
Your obedient servant,
O. C. ARMSTRONG,
President.

Latest List of New Inventions

Latest Patent Applications.

3230.—Clare, G. E.—Fireproof flo construction. February 3.

3171.—Clarke, W. W.—Erection buildings and component pa thereof. February 3.

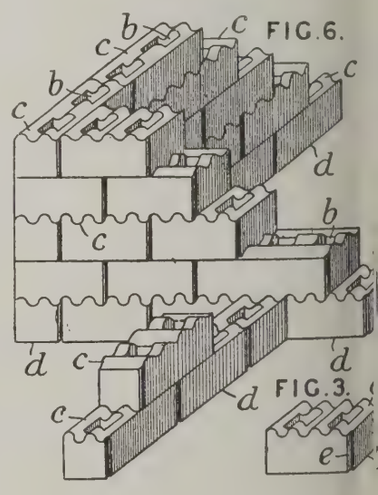
3269.—Dessau, M. M.—Stairways, e and materials for constructi thereof. February 3.

3147.—Gaskins, F. W.—Production inlaid, etc., slabs, etc. F ruary 2.

3191.—Robertson, G.—Method of p ducing building structures of ment or concrete. February

Abstract Published.

173103.—Building blocks.—Araldo, G. 4 Via Garibaldi, Spezia, Italy Blocks for walls are formed w vertical hollows *b* and w reverse corrugations *c* on two bearing-faces. The v tical edge *e* may be recessed



chamfered to bind the plaste the wall. Foundation blo are formed with one beari surface corrugated and other flat, Fig. 3. The holl may be filled with reinfo ment and concrete.

FIG.3.

The above particulars are specially prepare Messrs. Rayner & Co., Registered Patent Agent 5 Chancery Lane, London, from whom readers of Journal may obtain all information free relatin patents, trade-marks, and designs. Messrs. Rayner will obtain printed copies of the published specifica and forward on post free for the official price of 1/-

Leeds and West Yorkshire Architectural Society

A lecture under the heading of "A eneral Survey on Lighting and the Need or Illuminating Engineering" has been elivered before the Leeds and West orkshire Architectural Society by Mr. awrence M. Tye, the lecturer to the rchitectural Association and to Holo hane, Ltd. In the course of his remarks ie lecturer dealt with the history of luminants from the earliest days, and raced the various forms of lighting from ie time of vegetable and animal fats rough the candle, petroleum, and early as lighting down to the appearance of ie electric glow-lamp in 1879.

In great detail he proceeded to show iat the following of the ordinary glow-mp by the metal filament lamp, first of ie vacuum, then of the gas-filled type, upled with the introduction of incan-escent mantles for gas lighting, all ithin comparatively recent years, led) rapid progress in the efficiency of luminants, and a tremendous increase the general application of artificial ghting without the consequent regard or physiological requirements or the eed for obtaining the best effects. This dvancement had brought with it such igh intrinsic brilliancy values that the se of modern light sources without due recautions being taken to relieve glare esulted in positively dangerous effects pon the eyesight.

To show the extraordinary variation etween the intrinsic brilliancy of modern nd earlier light sources, reference was ade to the fact that the brilliancy of l lamps was in the neighbourhood of 8 candles per square inch, and in the se of gas-filled lamps, this is increased) as high a value as 2,000 candles per quare inch. This was absolute contrast to ie brightness of the average white sky, hich varied from two to five candles per quare inch, approximating more or less he brilliancy of the earlier illuminants. his consideration brought them to the ct that there was a correct standard or tensity of illumination for any given ass of service, thus by under lighting or ver lighting they produced an unnatural ondition upon the eye, with the result hat eye-strain with consequent fatigue et in. The standards which the lecturer dvocated had been carefully collated by luminating engineers in conjunction ith ophthalmic specialists and other xperts, and were available for use by all nterested parties.

The lecturer explained the polar curve, nd how that indicated to the illuminating ngineer the distribution of light given by ie source he was considering. It also owed how the distribution could be odified by the use of various forms of luminating glassware. From that he as able to derive his illumination curves nd correct spacing ratios to obtain the lumination intensities he required.

To revert to the polar curve, general ractice called for three distinct types of istribution. These were generally ac-pted under the headings extensive, tensive, and focusing types.

The former (extensive) type was de-gned for the use of buildings with fairly w ceilings, or where the points were ither a great distance apart.

The intensive type was intended for buildings having average ceiling heights and average spacing.

The focusing type was designed for buildings with exceptionally high ceilings, or where the points were placed fairly close together.

The lecturer described the various forms of illuminating devices at present on the market. The first type considered was the various forms of opalescent glass-ware. Whilst the material gave reason-ably good diffusion, it operated with considerable absorption, but what was more important from an illuminating standpoint, it could not give other than general distribution. Slides were then shown of two opal reflectors having totally different contours, followed by another showing the similarity in the distribution curve provided.

The next material considered was clear prismatic glassware, which, he said, had the great advantage that it presented a negligible absorption. You could, by changing the contour, get any type of light distribution it was possible to devise, at the same time excellent diffusion could be afforded by means of diffusion prisms, or those of a totally reflecting character. Slides were shown to indicate the de-finite character of the distribution curves produced. An excellent series of slides were shown illustrating actual night photographs of installations with the necessary data accompanying them. The examples shown covered churches, muni-cipal buildings, schools, shops, works, street lighting, flood lighting, etc.

The lecturer pointed out the special advantage of having all intensities mea-sured by actual photometric readings rather than judging them by the visual effect, and pleaded for co-operation of architects for the purpose of ensuring that the buildings under their control should be lighted with the aid of the illuminating engineer, so as to relieve the architect of the details of illumination planning, and making certain as to the correctness of the installation from a dis-tribution and economic point of view, as well as its effect upon the eyesight of those concerned.

The Building Trades Parliament

The proceedings of the Building Trades Parliament, summarized in our last issue, consisted chiefly of discussions of the reports of committees on Silicosis among stonemasons, and on education and apprenticeship, the latter of which was not before the Council. Opening the pro-ceedings, Mr. Storrs, the Chairman, said that it was considered necessary to amend the rules and constitution of the Council, and that the Administrative Committee had been instructed to con-sider suggestions and report thereon. Replies had not been received in time to enable them to present a report at this meeting.

Mr. Cox introduced the report of the Safety and Welfare Committee, and moved its acceptance, which was seconded by Mr. Dowyer. The report incorporates a memorandum by Professor Collis, showing the high mortality from lung diseases among masons in districts where sandstone is worked. On these grounds, and on the evidence afforded by other reports, the Committee considers that the Secretary of State should be asked to consider the application of a scheme of compensation to that class of work.

The motion was seconded by Mr. Barron.

Some discussion ensued, and the report was finally carried unanimously.

With regard to the report of the Education Committee, Mr. Smethurst said that they were impatient of delays, and that a spirit of criticism was hindering progress. The scheme had been revised in accordance with suggestions received from their builders, and he hoped that it could now go to the adherent bodies for approval. Fisher's Education Act was a great constructive scheme and would make better citizens. There had been some difficulty in agreeing with the plumbers, who had their own scheme, but this was being overcome.

The discussion that followed dealt mainly with the question of wages, ap-parently a stumbling block in the way of the apprenticeship scheme. It was finally decided to submit the report to the adherent bodies.

A conference is to be held at the Home Office with a view to securing a settlement regarding the proposed regulations for the use of wood-working machinery, to which numerous objections have been received from associations and individual firms.

The proceedings terminated with a vote of thanks to Mr. Blackman for his in-valuable work as liaison officer between the Ministry of Labour and the Industrial Council.

A Vest-pocket Book of Steelwork Data

The data for structural steelwork are so various and numerous that tables of them are indispensable even to the most accomplished of practitioners. For-tunately, such tables are now available in the most convenient form conceivable —a description that most aptly fits a booklet that has just been issued by Messrs. Archibald D. Dawnay and Sons, Limited, whose London address is Steel-works Road, Battersea, S.W.11, their country addresses being East Moors, Cardiff, and 2 and 4 Bank Street, Norwich.

With its rounded edges and flexible cover, this book measures only about $4\frac{1}{2}$ in. by 3 in., and can therefore be easily carried in what used to be called the watch-pocket before wristlets be-came "your only wear." Its usefulness is further increased by the inclusion of several pages of blank paper on which notes can be entered or rough calculations made.

Following two pages of diagrams relat-ing to varying (would not "various" be more accurate ?) types of roof trusses are two pages of weights and measures—avoirdupois, metric, lineal, cubic, or solid, square or surface measure, and at the end of the booklet are the L.C.C. requirements with respect to floor-loads, the London District Surveyors' Association list of the weights of building materials, and lists giving the approximate weights of roofing materials and of various sub-stances with which the builder has to deal. Steelwork, however, is naturally the subject that occupies the chief place

in the booklet. Safe-distributed loads are tabulated for steel joists, compound girders, channels, stanchions, single and compound, steel columns, cast-iron columns, struts (tees and angles of equal and unequal sides), weights of bolts and nuts, weights and areas of steel flats, round and square sections, corrugated sheets, and, finally, several pages giving the New British Standard loads and stresses for joists, heavy beams as stanchions, and channels. *Multum in parvo* was never better exemplified than in this exceedingly useful pocket companion, which professional men who wish to make use of it may obtain at Messrs. Dawnay's London address given above.

Coming Events

Thursday, February 23.

The Concrete Institute.—"What is the Use of the Modular Ratio?" By Mr. H. Kempton Dyson, M.C.I. 7.30 p.m.

Friday, February 24.

Royal Technical College, Architectural Craftsmen's Society, Glasgow.—"Symposium." By Messrs. T. I. Brown, J. Falconer, and R. Ferguson.

Monday, February 27.

Architectural Association.—No Meeting —Mr. Hilaire Belloc's Address postponed to May 22nd. Exhibition of Painting and Decoration by Walpole Champneys, and of Water-colours by C. J. Kennedy.

Wednesday, March 1.

Industrial League and Council, Caxton Hall.—"The Purpose of Economic Activities." By Mr. Hilderic Cousins.

Edinburgh Architectural Association. —"Practical Masonry." By Mr. W. S. Menzies, Clerk of Works, H.M.O.W., Edinburgh.

Trade and Craft

Change of Address.

The Considère Construction Co., Ltd., specialist designers in reinforced concrete, have moved from No. 5 Victoria Street to a larger and more convenient suite at No. 72 Victoria Street, S.W.1. The telephone number will remain unaltered, "Victoria 3033."

Simplex Conduits.

Messrs. Simplex Conduits Limited, of Garrison Lane, Birmingham, have sent us copies of list No. 915, which is being issued as an up-to-date supplement to their general catalogue of conduit and conduit fittings. Illustrations have been purposely omitted, the list being intended only to schedule the current prices of this section of the company's manufactures. It should be remarked also that it is solely a provisional means of giving the present prices, as in the course of the next few weeks it is hoped to issue a new and complete edition of the catalogue. The company are drawing particular attention to the recent introduction of certain distinctive features of their conduit, such as the Simplex transfer, which is now being issued, and also the cardboard caps which are supplied for the protection of the threads.

New Public Halls, Blackburn.

Anent the illustrated article, published in our issue for January 4, on the New Public Halls at Blackburn, Messrs. Ozonair, Ltd., of 96 Victoria Street, London, S.W.1, inform us that they carried out the complete system of ventilation and air purification for the whole of the renovated premises in the Town Hall, and also the new building comprising the Public Halls. The plant for the Town Hall deals with the council chamber, committee rooms, and public offices, such as rate collecting rooms, etc. In the Public Halls two plants were installed. One plant, of a capacity of 16,000 cub feet per minute, was installed to de with halls B and C, and was complete and put in operation before the wa The second plant, of a capacity 32,000 cubic feet per minute was i stalled to ventilate the hall A and t adjoining tea-rooms, etc. This plant h just been completed, and was official put into operation at the recent openi of the building to the public.

List of Competitions Ope

Date of Delivery.	Competition.
May 1	Business building, facing on an ordina London street, in which "colour" (o permanent nature) would be the domina feature. Premiums £100, £50 and Apply, Secretary R.I.B.A., 9 Cond Street, W.1. (For full particulars see l weeks issue.)
June 12–17	Owen Jones and Mulready Prizes for stude for Architectural decoration, woodwork a cabinet work, textiles. Apply Secretary, T Royal Society of Arts, John Street, W.C.
June 30	Museum and Institute as war memorial City of Auckland, New Zealand. C £170,000. Premiums amount to £1,0 Apply Secretary, R.I.B.A. The followi cablegram has been received by the Sec tary of the R.I.B.A. from the Mayor of Auc land.—"Letter November fourteen receive advise competitors wait answers numero questions in mail due London end of mon —Mayor."
	The promoters of the Auckland War Memor Competition have asked the R.I.B.A. to fo a register of intending competitors, so t information received from Auckland may distributed to the competitors without l of time. All architects who intend to ta part in this competition should se their names and addresses to the Secreta 9 Conduit Street, London W.1., as soon possible.
No Date	Trujillo's Statue of "Liberty." The R.I.B. Competitions Committee desire to call t attention of Members and Licentiates to t fact that the Conditions of the above Co petition are unsatisfactory. The Compe tions Committee are in negotiation with t promoters in the hope of securing an amen ment. In the meantime Members and Lice tiates are advised to take no part in t Competition.

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dnesday, March 1, 1922. Vol. LV. No. 1417

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

THE "FRANCE": GRAND SALON

27-29 Tothill Street, Westminster, S.W.1.

The "Empress of France": Card-Room Chimneypiece

George A. Crawley, Architect

The card-room of the "Empress of France" is designed in the Adam manner, and is equipped with Heppelwhite furniture. The chimneypiece, a reproduction of an original model, has an overmantel consisting of a gilt and carved mirror designed in the style of the period.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

dnesday, March 1, 1922 Volume LV. No. 1417

How to Avoid "Faulty Design and Construction"

DRAMATIC developments have followed the Washington cinema disaster. The coroner's jury which held an inquiry into the death of the persons (about 100 in number) who perished on uary 28 by the collapse of the Knickerbocker Cine- ograph Theatre at Washington, U.S.A., found that accident was due to "faulty design and construction of building, and lack of adequate inspection and super- on," and they added a rider recommending "that y theatre or other building used for the purposes of lic assembly in the city be closed forthwith until its ty is assured."

/hile, in the face of so appalling a disaster, strong action natural and inevitable, it would seem a little precipitate he part of the Public Prosecutor to order the immediate st of the architect who designed the building, and of t other men, including the builder, the contractor who ted the steel roof work, the engineer who designed it, three public officials charged with the inspection of is for the construction of new buildings. This seems to ather wholesale and draconic dealing, and the incident gests the reflection that an ounce of such zeal exercised re the event would have been of infinitely more value n a ton coming after it. These wholesale arrests, how- , may have the healthy effect of convincing the public wo hemispheres how essential a thing it is to take every ible precaution against unsafe building—to forestall it er than to penalise it. It may very well be that all persons concerned in the design, erection, and inspection his ill-fated cinema are highly skilled and entirely com- nt persons, and that each in his own department exer- l every reasonable care, and co-operated with the others the same object.

most searching investigation should determine these ts. If it should turn out that this lamentable accident rred in spite of the utmost that skill, care, and foresight d do to provide against it—that is, to make it humanly king impossible—there may still be drawn from the ster a lesson or two that should be well pondered by the lic as well as by professional men.

ranting that the persons concerned in the erection of structure were thoroughly qualified—as, not having their names, we are very anxious to be assured that were—then the reason for the disaster must be sought e materials and in the conditions under which they were l. On these points the evidence should be very oughly sifted. Nor will it be sufficient to know that cement was of approved quality, was properly mixed er skilled supervision, was applied in sufficient quantity he right way; that the steelwork had undergone due nination and testing; that it was flawless (so far as d be ascertained); that the stresses and strains were ulated on a sound basis, were closely checked, and rately worked out with a due margin for safety; that workers were under close supervision for every opera-

Beyond ascertaining that all these precautions had been duly observed, it will be necessary to know whether the work was executed under conditions essential to soundness and safety. Was the weather favourable? Did the building owner rush the work? To build in unfavourable weather, and to build in a hurry, have been prolific sources of disaster. Yet in the United States speed is often pursued (we do not know that it was in the Washington cinema case) as if it were the supreme object—pursued breathlessly, feverishly, and sometimes recklessly, one is tempted to say. Of course, under certain conditions, speed and stability are not incompatible, provided always that the pace is not forced unnaturally—that is, for instance, forced in defiance of the laws of "natural set," and against the natural limitations of the worker.

But indeed it is not clear how speed of construction can come into the question of the Washington roof collapse, which seems to be attributable to overloading through a heavy fall of snow, though the fact remains to be proved, and naturally we are disinclined to say a single word that might prejudice the inquiry, the results of which will be awaited with intense interest on both sides of the Atlantic.

On the Washington disaster it would be improper to comment any further at the present stage; but a few general and quite abstract and detached observations on the general question of stability will be both permissible and timely. A condition precedent to sound building is, of course, the selection of a properly qualified designer and an unquestionably competent contractor. This consideration opens up another aspect of the supreme importance of securing the "confidence of the public."

We have, as the painful impression produced here by the Washington disaster strongly reminds us, to allay the consequent very natural alarms of the public: to convince them that we have at least as much regard for the physical stability of the building as for the financial stability of the builder.

Convincement on that point, however, is a matter which entirely depends on the good sense of the public themselves. They must choose the right men to do the work. They will experience no difficulty about that. It is not hard to find thoroughly competent designers, and completely trustworthy contractors—men or firms who have a high professional or business character to maintain, and who would always infinitely rather lose money than reputation.

This integrity, based on competence, is the only real guarantee of safety and efficiency, and the building owner who fails to apply such a simple test incurs a serious responsibility. He must never fail to assure himself of the satisfactory character of the credentials of the architect or of the constructional engineer, or of the specialist, in whom he puts his trust.

This, we repeat with emphasis, is the building owner's own personal responsibility. In the public interest as well as in his own, he has to guard against the risk of encouraging incompetence and pretension; for, unfortunately, in the

absence of adequate legal restriction, any unqualified or dubiously qualified person—tinker, tailor, chimney-sweep—may call himself an architect, and any blacksmith may with impunity describe himself and set up in business as a building expert; any clever ex-seventh-standard elementary-school boy who can juggle a little with figures, can practise as a specialist in steel construction, or what not, and the law will not interpose until it is "officially informed" of the disastrous effects of some inexpert miscalculation.

But then what of the building inspector? Where does he come in? Will he not afford the public sufficient protection? Generally speaking, in this country he does his duty with fussy thoroughness. Nevertheless, he is held in great respect; for no doubt he prevents many nasty accidents. Sometimes, however, he "comes in at the death," and he is commonly wise after the event—not necessarily after the accident, but after the accident has been unco sciously arranged for by some incompetent person. T building inspector usually sees what is wrong when t work is "up," and to condemn it at that stage is to bring d and distress to all concerned. It is only when the work h to be pulled down and re-erected (both operations en mously increasing the originally estimated expense) that t building owner realizes the folly of placing the commissi with unaccredited persons.

Certainly—though this is but a sorry consolation—havi to take the building down is better than to have it co tumbling about his ears, but infinitely best of all is to c sult at the outset designers, contractors, experts of unqu tionable repute, who can point to an honourable record entirely successful work, and in whose competency, the fore, complete confidence can be reposed.

Notes and Comments

University Men in the R.I.B.A.

Cambridge graduates who happen to be architects, or architects who happen to be Cambridge graduates—the distinction is very subtle—have formed a club to help as much as possible the work of the Cambridge University School of Architecture. "As a first step, they have agreed to double the donation of £50 given this year by the R.I.B.A. to the funds of the school; and they propose to meet once a year, either in Cambridge or London, to establish relations with the staff of the school, and to keep in touch with its work generally." More than thirty Fellows or Associates of the R.I.B.A. are graduates in Art of Cambridge University, and about a score (including, of course, the President) are Oxford men, the relative proportions being roughly, therefore, three Cambridge men to two from Oxford. More than thirty members hold degrees in arts from other universities, half a dozen or more are Bachelors of Science, and a few are Bachelors of Architecture of Liverpool. Mr. Maurice E. Webb is the chairman of the newly-formed club, and it is very certain that the Cambridge University School of Architecture will derive immense moral and material advantages from the sympathetic interest of the club, the members of which will find their exceeding rich reward in this means of keeping in touch with their Alma Mater, and in doing a hand's turn for Architecture. It would be of mutual advantage to the R.I.B.A. and the universities to come into closer association, and the Cambridge members of the Institute have hit upon a happy means of furthering this object.

Mr. Asquith's Art Homily

What can a politician know about art? Unhappily, his functions have come to be generally regarded as the very antithesis of every art save that of subtle deception. A cynic would say that the opposition springs from the one being an artist in graphic representation, and the other an adept in skilful misrepresentation. Consequently the newspaper heading, "Mr. Asquith on the Mission of Art," excites fewer hopes than fears for art. To do him justice, it must be assumed that he did not volunteer to speak on the subject, but simply could not help it without declining the honour thrust upon him by his constituents of opening the Paisley Art Institute Exhibition. For a politician who is also a lawyer—a combination usually reckoned to be absolutely fatal to art—Mr. Asquith did fairly well, though to condemn cubism and vorticism to-day is "thrice to slay the slain"; while to speak of "the true mission of art" as expounded in "The Stones of Venice" and the "Seven Lamps of Architecture," as if Ruskin (who is "dead, long dead") had delivered the last word on the subject, was to recount ancient history in archaic language. Mr. Asquith was rather more fortunate in his further appeal to ancient history, when he said: "The pages of history are writ large with the doom that awaits the community, great small, that allows the best faculties of its best-equip citizens to be monopolized and absorbed in the pursuit material gain. We have heard," he continued, "a gr deal recently about economy. A nation could not d more shortsighted thing than curtail expenditure upon higher humanities and upon works of art." Altho these are but trite and perfunctory observations, t restatement by such a speaker on such an occasion sho help a little towards saving the country from the threate degradation of education and the arts in the craze "economy" falsely so called. "Blind swiping" with Geddes axe may do irreparable harm to the amenities.

"Higher London"

The decision of the London County Council, at its meet of February 21, to allow the erection to a height of 80 ft buildings whose content exceeds 250,000 cubic feet, been hailed with delight by the protagonists of the "Hig London" movement, the chief of whom writes to "" Times": "If the movement for higher buildings is, as opponents state, a 'campaign,' then this important adopt of one part of the programme of the movement may properly described as the winning of the first 'battle We should prefer a more pacific and philosophic view. relaxing its by-law as to height, which in certain case has extended from 60 ft. to 80 ft., the L.C.C. has not yiel to clamour, but has simply made a concession to comm sense, and any extravagant anticipations based on concession are foredoomed to disappointment.

The Shakespeare Theatre

Is the Shakespeare Memorial Theatre project de Apparently Mr. George Bernard Shaw thinks that t are still some sparks of life in it; for when he was inv to take part in a meeting for the promotion of a moven to provide in London a national theatre for the prese tion of Shakespeare's plays, he resorted to the metho Socratic questioning. "As he was a member of the ex tive committee of the Shakespeare Memorial Nati Theatre, he was much puzzled" by the invitation. the inviter asking for his support in ignorance of existence and history of that body, or did he regard i a negligible failure? The reply was a pretty blunt only partly true assertion "that the committee mentio by Mr. Shaw had done nothing." But, indeed, it has something. It plunged in with a great splash, but whe it has since sunk, swum, or is just placidly floating, is very evident. Since it handed over to some war institu or other the site of the projected theatre nothing fur has been heard of it. Surely its period of hibernatio

ıbation should be over by now, and Mr. Shaw and the er active and intelligent members of the committee uld be seen busily preparing the conditions of the ional theatre which is to be, we all trust, a gem of itecture that shall not disgrace the name it is to memorate. These two movements, the old and the . should join forces, with that object.

No Dearth of Stained-glass Workers

n our issue of February 15 we commented on a widely ulated newspaper statement alleging a dearth of stained-glass artificers. Mr. Henry T. B. Davies, London secretary of the National Society of Glassworkers, writes to assure us that there is no dearth, but that, on the contrary, many skilled mechanics in this country are at present anxiously looking for work. He fears that the allegation may have the effect of bringing foreign workers into this country. This is a contingency that we should greatly regret. Moreover, we have a rooted aversion to inaccuracy. On both these grounds we willingly record Mr. Davies's authoritative denial of the allegation which, in all good faith, we cited from "The Times."

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nification and Registration: A Rejoinder

There are two sides to every question, a right and a wrong. Which side is which may be settled, as a convention, by a iority agreement, but time alone will prove the case. The two sides of the case for Registration may be simply stated: On one hand are the advocates of Unification now and Registration at some unknown future time, and on the other are those prefer to obtain Registration together with Unification. Each side may claim a fair hearing; and as the one was defended THE ARCHITECTS' JOURNAL *of February* 15, *this week the views of the other are given.*

REGISTRATION is an ideal which has been pursued by the R.I.B.A. for many years, and which brought into existence the Society of Architects full of enthusiasm towards the desired end. se two bodies, together with the Allied Societies, are making a great effort to unify the profession of hitecture as a necessary preliminary step towards aining the assent of Parliament to a Registration which would, primarily, prevent any but qualified registered architects practising the profession of itecture.

ery few architects—and least of all the members of the .B.A. defence league—are in conflict with this ideal—ugh many doubt the possibility of its fulfilment—but, the other hand, there are many who, not being blinded the distant glory, are aware of the hard, cold facts of case at the present time.

n the first place, even the most ardent advocate of nification first" cannot give any definite promise of a istration Bill ever going through Parliament. The ck architect is not a menace to the public as the ck doctor or dentist is, and the law already provides quate protection against shoddy and insanitary build-

he opinion of parliamentary agents has in fact been en by the R.I.B.A. defence league, and it is to the ct that on the merits of the case there is little hope of egistration Bill ever going through Parliament.

hen come what would be the facts in the case of imme-e Unification. Suppose, for the sake of argument, the essity of "Unification now" be admitted, what would ts effect if a Registration Bill were not passed imme-ely afterwards? Admittance to the R.I.B.A. by the ting system of examination would soon go by the rd, the necessity for a long and expensive training ld rapidly disappear, and all and sundry would come ng in like the waves of the sea, and would continue lo so indefinitely.

he effect of this policy would be to destroy imme-ely the standard of qualification which has been riously built up, and permanently to reduce the stige of the R.I.B.A. to the level of the unqualified itect.

he advocate of "Unification now" has a queer way of eiving himself by saying that all and sundry *would* be mined; but if one single candidate be rejected—and it easonable to presume that many would be—unification ld not be obtained, and, indeed, would be prevented the very fact of the examination. "Unification now" hout Registration must mean the open admission with voting powers to the R.I.B.A. of any candidate who may call himself an architect.

Ten years or so ago the Associates of the R.I.B.A. were asked to sacrifice their professional standing, earned by examination, in the cause of unification, and that Registration might be achieved. From purely unselfish motives they did this thing—and the sacrifice has proved to be a real one—that the next generation of architects might reap the benefit. To-day they are being asked to do the same thing for the same reasons and with the same prospects—or lack of prospects. May they not anticipate a series of similar opportunities for showing their altruistic idealism in the future if they now agree to play with the shadow instead of grasping the substance?

Like all true idealism the present cry for "Unification now" is a little vague. The committee of the R.I.B.A. which is dealing with this matter cannot, at present, give any definite promise of Registration ever becoming a fact; it can give no satisfactory answers to the simple questions "How many new members may be expected in the event of the door being opened?" and "How will you compel them to come in if they do not wish to do so?" and, in effect, that whilst admittedly damaging the status of corporate members, especially the Associates, without securing any compensating advantage, "How is Unification even to be obtained and maintained pending the passing of a Registration Bill?"

The resolution passed at the recent special general meeting of the R.I.B.A. was an expression of opinion of the corporate members on that view of the question of Registration which places Unification before Registration. Whether the resolution failed or not, according to a strict interpretation of the by-laws, there is no reason why the Registration Committee should not continue to investigate the possibilities of a Registration Bill. But if it does not wish its labours to be wasted it will be wise to drop the "Unification first" scheme.

The question is a very important one for all members of the R.I.B.A., especially for the Associates, and of these more particularly the provincial members. To the great majority of these the scheme of "Unification first" and a very remote chance of Registration a long while afterwards appears to be obviously most injudicious, and as its advocates seem to press it with so much insistence the uninitiated can only conclude that there is some, as yet undisclosed, means of obtaining Registration known only to those behind the scenes. This would appear to be the only reason which could justify the logic of those in favour of "Unification first."

"COVENANTER."

Mr. Arthur J. Davis on the Internal Decoration of Ocean Liners

MR. DAVIS had a very cordial reception at the R.I.B.A. the other night. The long room was crowded—convincing testimony of the recognition of one who is held to be an authority on his subject. It was particularly interesting to note how the skill of the architect has come not only

MR. DAVIS DISTINGUISHES BETWEEN A "WET" AND A "DRY" ARCHITECT—

into the internal decoration of a ship, but also into its planning. This is a new and great possibility.

The most interesting thing of the evening was a lantern slide showing the interior planning of the main rooms on the ex-German liner "Vaterland," now "The Leviathan." This suite of rooms is most beautifully planned. There is a fine feeling of space, and the rooms are linked and related to one another in a manner worthy of all the traditions of monumental planning. The rooms are arranged along the centre of the ship, unobstructed by the funnel casings, which normally come up through the centre of the ship. The difficulty of the funnel casings has been overcome by the ingenious method of dividing up the funnel casing into two below the main suite of rooms and arching the two halves to join above the rooms. The interesting point is that this departure was made on the suggestion of an architect, Mr. Mewès.

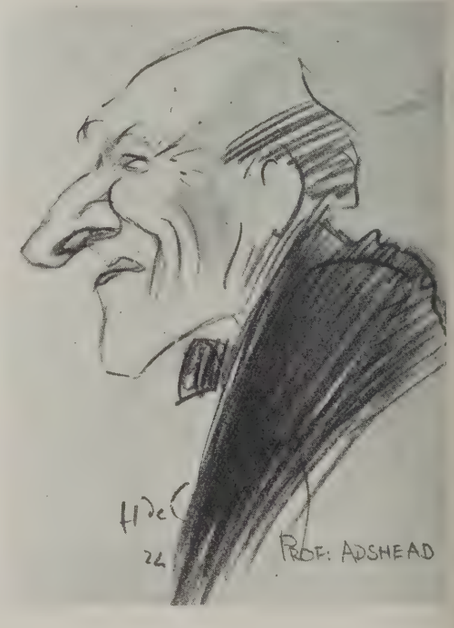
Mr. Davis said: "The Decoration and Equipment of the Ocean Liner" covers such a large field that I propose to confine myself to broad principles, and shall, perforce, have to omit the discussion of many interesting side issues.

It is not within the province of this paper to deal with the decoration of the sailing ship, though volumes could be written on this subject, to mention only the ships of the seventeenth and eighteenth centuries, on which some beautiful work of the carver, painter, and gilder can be found. A visit to the Maritime Museum of the Louvre and to Greenwich Hospital will show what has been achieved in this direction; but we must leave this fascinating subject and pass on to the beginning of the nineteenth century, when steam was first introduced in navigation, and the "Charlotte Dundas," constructed by Symingt was launched on the Forth and Clyde canal.

She carried an engine, designed by the great Jar Watt, which drove a stern wheel. Her success inspired American engineer, Robert Fulton, to build the "C mont," in New York, five years later. This vessel, a engined by Watt, travelled up the Hudson River fr New York to Albany; but it was not until May 24, 18 the day on which Queen Victoria was born at Kensing Palace, when the "Savannah," a wooden sailing s fitted with an auxiliary steam engine, quitted port which bears her name, and a fortnight later steam slowly up the Mersey to the astonishment of a large cro of spectators, that the Atlantic steamer service may said to have received its effective initial impulse.

The "Britannia," the pioneer vessel of the Cunard flo measured 207 ft. long by 34 ft. broad and 22 ft. deep, a she was fitted for the accommodation of 115 cabin p sengers, but had no steerage. Her average speed w 8½ knots per hour on a coal consumption of 38 tons day. Compare with this the "Aquitania," completed 1913, which has accommodation for 3,250 passeng together with a crew of 1,000; a floating population lar than that of great many English borough towns.

This rapid development has brought about a comp revolution in the methods employed, both as regards internal planning and the equipment of these ships. T ship designers can no longer deal adequately with large areas and surfaces to be planned. The space for important public rooms is so vast, and the height of th rooms so great, that the expert knowledge of the archi is necessary to deal with the arrangements of these av able spaces.



AND PROFESSOR ADSHEAD SMILES.

All the features with which we have long been fam in our great hotels and public buildings are at the disp of the architect in the planning and decorative equipm of the modern liner. So numerous are the rooms, so g

The "Berengaria" was handed over to the Cunard line after the war. She is better known as the "Imperator," the magnificent Hamburg-Amerika liner. She was launched in 1912, and took her place in the Atlantic service during the summer of 1913, when she was the largest ship afloat. The Palm Court is one of her very special attractions.

area, and so increased the available height that it has
w not only become possible but necessary to employ
recognized rules of architectural planning.

n this respect it may not be uninteresting to give a
rt list of the public rooms required for the first-class
ommodation of an Atlantic liner such as the "Beren-
ia," "Majestic," or the "Aquitania," each of which
eight floors or decks, communicating with one another
elevators, as well as several staircases. On the lower
ks, in addition to the many staterooms, cabins, kitchens,
l service rooms, etc., we find the great dining saloon
pable of seating from 500 to 600 persons), with an
oining grill-room, foyer, and lounge, a large swimming
h and gymnasium, Turkish and electric baths, and
ser's office, etc. Above, on the upper decks, in addition
the main staircase and several lifts, we find the ladies'
wing-room and writing-room, a hall, lounge, and ball-
m, the veranda café, smoking-room, exhibition gallery,
ber's shop, book and flower stalls, while on the con-
ted German liners a restaurant and winter garden were
tures of considerable prominence.

Methods of design appropriate when used in connection
h buildings cannot be transposed without change and
ıptation to the requirements of sea-going vessels. The
hitect who does not modify his designs to suit these
cial requirements will be seriously disappointed when
comes to view the result. The pitfalls to be avoided
legion, and many schemes which look very well on
er may prove to be failures when put into execu-
n. Decorations, for instance, should not be designed
hout full consideration being given to the sheer
l camber, which in certain portions of a ship are
siderable. Another temptation to be avoided is to overcrowd a room with heavy ornament and meretricious decoration.

Although the average life of a great liner may be assumed to be only about fifteen years, all the material and workmanship used in the construction must be of the very finest quality. Of late a great number of experiments have been made with new materials. Many of these have stood with remarkable success the severe tests to which they have been subjected, and there seems to be no limit to future possibilities in this direction. It may be worth mentioning that there has been some prejudice, especially among foreign companies, against the employment of plaster ceilings; but in ships such as the "Mauretania," "Laconia," "Empress of France," and "Olympic," where such ceilings have been tested, they have been entirely satisfactory. To specify plaster and carton pierre for ceilings, domes, coves, and cornices may be safely recommended.

Other decorative materials—such as stucco, tiles, mosaic, scagliola, and trellis—may also be used with discretion; but marble and brickwork should be avoided on account of their weight, not only in appearance, but in fact.

Vibration at sea is also an extremely serious question in fast-going vessels, and materials which are likely to scale off or crack should be avoided. The two principal movements are pitching and rolling; and although the latter has been minimized on vessels of recent construction, where such innovations as anti-rolling tanks have been installed, these movements are still felt to a considerable extent in bad weather. As the horizontal section through the centre of the hull of a ship much resembles the shape of an elongated cigar, the pitch or plunging movement is

THE "BERENGARIA": BALLROOM. MEWES AND BISCHOFF, ARCHITECTS.

THE "BERENGARIA": DINING SALOON. MEWÈS AND BISCHOFF, ARCHITECTS.

naturally less noticeable than the lateral roll. It is wise, therefore, to design all the swimming-tanks and baths so that their length is parallel to the long axis of the vessel, the movement of the water they contain trying to regain its own level being thus minimized. The same remark applies equally to the planning of staircases and companion-ways, which are easier to negotiate in bad weather when the direction is fore and aft—or, in other words, parallel to that in which the ship is moving. In these staircases, which should be substantially balustraded, and not too wide, it is advisable to avoid winders, as well as awkward turns. Easy flights with comfortable landings are virtually essential.

In a room where comfort is above all things desirable, in my opinion it is advisable to avoid the exaggerated use of skylights and glass domes. With the exception of vestibules, galleries, and staircases, all reception-rooms, wherever possible, should be lighted laterally.

The standard material used for painted woodwork on board a modern liner is well-seasoned Honduras mahogany; but Cuban mahogany, teak, oak, satinwood, walnut, black bean, and many other varieties of hardwoods are often used for decorative purposes. Deal and pine are too soft, and should be avoided. All panelling should be screwed invisibly to horizontal and vertical grounds, which have in turn been fixed to the steel framing of the ship, care being taken that everywhere thick felt is inserted in the positions where the panelling is screwed to the backing, so as to avoid the creaking and groaning produced by the straining of the vessel.

Not only must provision be made for suitable casings for water pipes, ventilation ducts, electric wires, cables, and fire appliances, but the intakes and outlets for ventilation must be duly considered in connectio with the decorative schemes. Here it is often advisabl to make certain sections of the cornices in hardwoo so that they may be easily unscrewed to enable th engineers to examine the wires and pipes conceale behind them.

The floors, which are for the most part covered with thick cork carpet over a layer of magnesite composition are not infrequently laid with wood parquetry fixed t creosoted fillets. The principal rooms and cabins ar partially covered with fine rugs and carpets, and th vestibules, gangways, and stairs by a non-slip rubber tilin or cork carpet.

With regard to general decoration, it is of course im possible to lay down any golden rule as to what style o styles are the most suitable for a liner. Of recent year several attempts have been made to decorate all the room in the vogue of one particular period; but, although b no means unsuccessful, such treatment tends rather t monotony, and a variety is therefore more generall preferable.

Perhaps the best examples of Jacobean, Restoration Georgian, Regence, Louis XV, Louis XVI, Adam, an Empire, if simply treated, are amongst the most suitabl But in these days, when we find ships which have bee successfully decorated in nearly every style known to ar from Early Indian to Neo-Grec, an architect need never b at a loss to find a suitable period within which he can giv a successful expression to his ideas.

The architect must in every instance consider the specia conditions under which the ship he is dealing with intended to travel. It is obvious that the requirements o a liner steaming between Liverpool and New York ar

ntirely different from those of another bound for a tropical climate. In all such cases a special programme must come into force; but there is no reason why a versatile architect, having once grasped the essential necessities, should not adapt his talents to the requirements of any particular problem which he may be called upon to solve. He will doubtless be required to design or to give his opinion upon all such important matters as the choice of pictures and tapestries, furniture, carpets, silks and hangings, china, glass, silver, electric fittings, and all the thousand and one harmonies of form and colour which, by reason of his special training and technical knowledge, he is so pre-eminently qualified to control.

The typical post-war ship is also smaller and the tonnage less. The length is reduced from over 900 ft. to 600 ft., the breadth from 90 ft. to 73 ft., and the tonnage from 54,000 to 20,000. Efficiency and economy are the watchwords now in force. Swimming-baths, gymnasia, theatres, have had, perforce, to go.

Whatever our shortcomings may be as regards land architecture and decoration, we can reflect with justifiable pride that in ship construction the British designer holds the first place in the world's estimation. The vessels which have been built on the Clyde, the Tyne, or the Lagan, whether they be battleship, liner, or tramp, bear the stamp which marks them as being the aristocrats of the sea.

The reputation of our naval confrères is so high that it is for us architects who are entrusted with the decorations of the interior of their ships to see that this standard is maintained throughout, and that our joint labours are worthy of that genius for naval construction which commands the admiration of the world.

THE "EMPRESS OF FRANCE": CHIMNEYPIECE IN FIRST-CLASS LIBRARY.
GEORGE A. CRAWLEY, ARCHITECT.

The card-room of the "Empress of France" (unlike the other apartments of the ship, which follow the Stuart period of decoration) is designed in the Adam manner. The panelling is coloured a delicate mouse-grey, with mouldings picked out in white. Around the fieldings of each panel is a honeysuckle border lightly stencilled. Heppelwhite furniture gives an appropriate finish to the room.

THE "EMPRESS OF FRANCE": DETAIL OF FIRST-CLASS SALOON.

Discussion

Sir Westcott S. Abell, who oved the vote of thanks, said at he was most indebted to . Davis for his excellent per. He could not speak as architect, but as a naval chitect he knew how difficult was to combine artistic urnth on board ship with cold uctural necessity. The most fficult part of the ship to treat is the large dining saloon, ich was invariably placed on e of the lower decks, usually ree decks below the top deck. was of necessity large in perficial area, and the height om floor to ceiling of any ck was rarely more than ft. That meant a large, low, pressing room unless great ll was used in its decoration. great deal of ingenuity had en displayed in giving height ect by suitable treatment. re often the centre part of e room ran up through the ck above (sometimes two cks above), and was finished th a domical treatment. One at criticism he would bring ainst the modern fashion of corating a ship was that it l not express the spirit of the p. The beautiful lines of the p were not reflected in its erior. All that went to the king and running of a ship so essentially efficient and nomical; the lines of a ship ex- ssed that wonderful austerity, that elimination of all that was irrelevant. The very machinery on a ship was more efficient than that on land; it had to be; there was little opportunity to rectify flaws at sea. In the internal decoration of ocean liners one got all the semblance of bricks and mortar, and the weighty and bulky materials of land building. That was in itself inconsistent with the clean efficiency of the ship's structure. Would it not be possible in the course of time to evolve a style of decoration more in keeping with the structure of a ship and peculiar to ships? The graceful lines of the ship offered a suggestion; perhaps in the end they might have a parabolic style of internal decoration. All the main lines of a ship were really curved, whether longitudinal or transverse. Colour was very life itself on a ship during a long voyage. After days of gazing at the cold grey-green of the northern seas, or the monotonous blue of the more southern oceans, one's eyes turn to some object or place that was coloured for relief and ease.

Mr. Allan Bryce said that he had been impressed by the great advance which the passenger ship had made during the last twenty years. He could well remember the time when they were all too dark and evil-smelling; when they showed no signs of having been planned in the sense that a house was planned; when one's cabin, for instance, was all too near the smoke-room, and anything said in the smoke-room could be heard in the cabin and vice versa. But despite this great progress made in one's comfort on board ship there was one thing that appeared to have been left out, and that was the bathroom. It was usually left with the bare structural plates showing, including the rivets.

Mr. Wills said that Mr. Davis had shown them that the fact of being at sea had been almost lost sight of in the

THE "EMPRESS OF FRANCE": FIRST-CLASS SALOON.
GEORGE A. CRAWLEY, ARCHITECT.

THE "EMPRESS OF FRANCE": CHIMNEYPIECE IN SMOKING-ROOM. GEORGE A. CRAWLEY, ARCHITECT.

THE "SAMARIA": CHIMNEYPIECE IN STATE ROOM. WILLINK AND THICKNESSE, ARCHITECTS.

wealth of land decorations. Surely that was not the last word. There was a certain traditional style of ships' decoration in the old ships before steam which was characteristic of ships.

Mr. E. Warren agreed with that point of view. The simulation of home at sea appeared to have an air of sham. The decoration of a ship should be suggested by the lines of structure. Corinthian columns, for instance, were to land architects symbols of stability. What if that Corinthian column was leaning over at an angle of 45 degrees? Mr. Warren said that he would like to see that an architect was allowed to have full play in the designing of a ship's internal decoration; in time he would then evolve a decoration belonging essentially to the ship.

Mr. Paul Waterhouse said, with regard to the discussion as to the possible evolution of a curved style of interior decoration of ships, that whatever else was curved in the cabin the table must be approximately flat, which rather enforces the idea that the scheme of decoration must get down to the flat somewhere.

Mr. Davis, in reply, said that the idea that there should be a greater relation between the outer lines of a ship and its internal decoration had occurred to him when he undertook this work fifteen years ago. Mr. Wills's idea that a ship's decoration should have pictures of dolphins and

THE "HOMERIC": DETAIL OF SMOKING-ROOM.

pirates rather broke down by the fact that the people who travelled across the seas were neither interested in dolphins nor were they pirates. They were usually very seasick men and women who disliked their enforced captivity on board ship. Fifteen years ago he approached the director of a shipping company with ideas similar to those expressed. They sent him across the Atlantic, the sea was a bit rough, and he had an unpleasant voyage, with the result that he came back completely reformed. A great modern transatlantic liner was not a ship, in the ship sense: it was a floating hotel, or, more correctly, a floating town. Regarding the bathrooms: It was strange that the bathroom had been passed over. He had often noticed that after going through a handsome suite of rooms the bathroom of the suite was as bare of comfort and as uninviting as the boiler-room. F. E. T.

Some Notes on the Decoration of Old Ships

It will be noticed that the discussion on Mr. Davis's address centred round the question whether liners should be decorated as you decorate a house or a hotel, or whether the fact that they are afloat should compel their decoration into shapes and patterns symbolical of the sea and expressive of the construction of ships. This is a point which could provoke endless discussion. Mr. Davis's comments on it are sane and enlightening, and it is interesting to observe how the old ship designers tackled the question during the seventeenth to nineteenth centuries. About the interiors of the old ships there is very little information, but their poops and sterns were nearly always gorgeously ornamented, the extent of the decorations varying with th size and importance of the ship.

On page 343 is a model of a line-of-battle ship of the ye 1650, one of the fleet of the Hanseatic League. The ste is treated architecturally with pilasters between th windows and a balustrade, but is so modified as to expre in the most delightful way the swiftness and grace of th ship and the romance of the sea. In the panels at th stern occur recumbent Neptunes and Tritons, and alo the top side dolphins are introduced to mark the brea in the bulwarks.

There are many such models in the United Servic Museum and in the Naval Museum at Greenwich. F their means one is able to trace the evolution of naval arch tecure, and it is curious to notice the relations betwe "wet" and "dry" architecture. In the seventeenth ce tury the intimacy between land and sea architecture was close that a resemblance can be traced between the fron of the timber houses and the sterns of the ships.

On page 344 is a view of the "Victory" (not Nelson "Victory"), a ship of a hundred guns and built in 173 This again shows the application of ordinary architectur motives. The end tiers of windows are grouped vertical into towers, with two open balustraded galleries betwe connecting the decorated quarter-pieces. The ornamen here is Baroque and symbolical of the sea, but the rest the design might be that of an ordinary house, except tha it has been translated into terms of ship structure. Sure the same kind of translation might be possible in the decor tion of our modern liners.

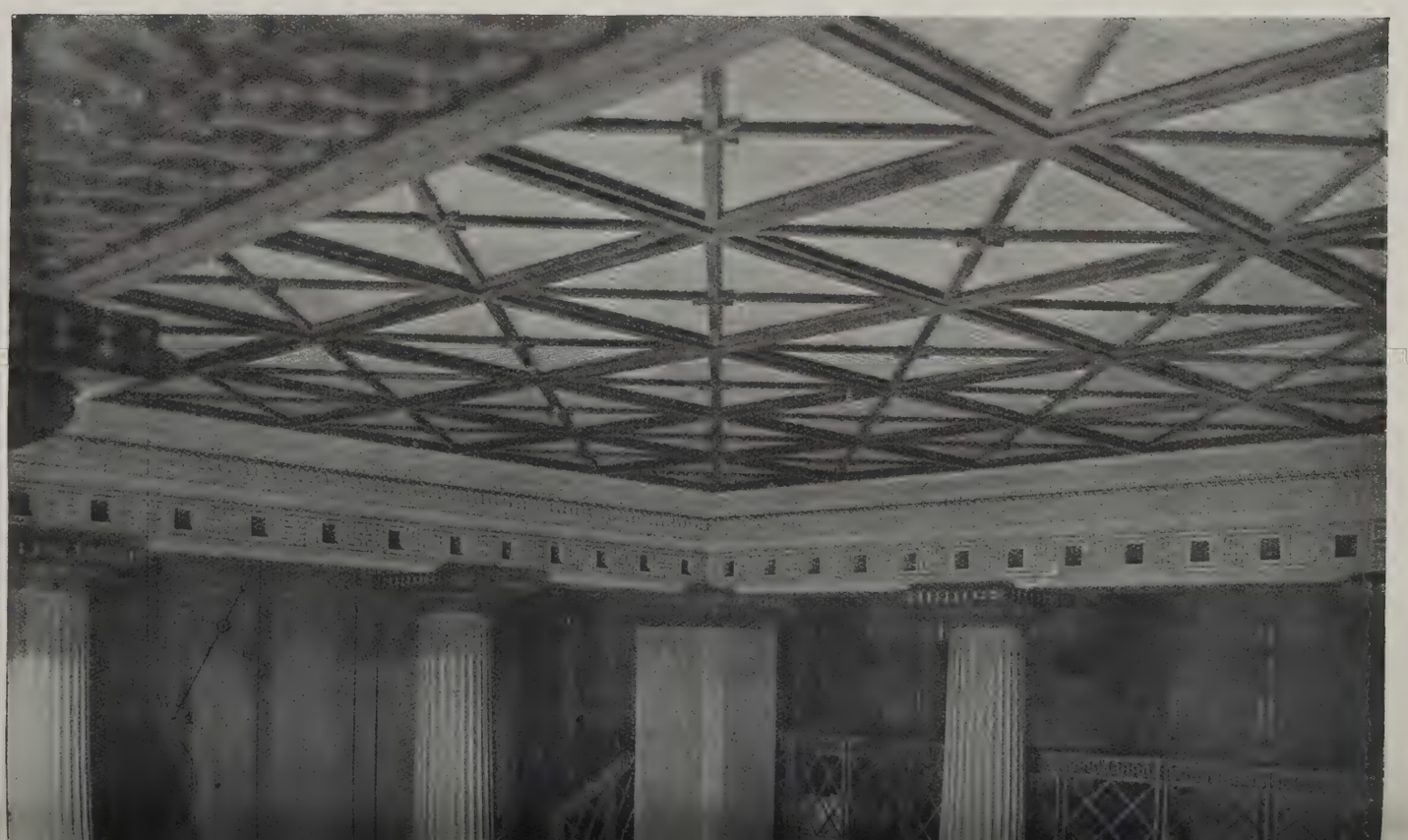
The building of great timber ships was carried on righ into the middle of the nineteenth century, but their decor

(*Continued on page* 343)

THE "MONTCALM": CABIN CARD-ROOM.
CRAWLEY AND BAILEY, ARCHITECTS.

The "Berengaria": End of Swimming Bath

Mewès and Bischoff, Architects



The "Berengaria" (originally the "Imperator," of the Hamburg-Amerika Line) has lately been reconditioned throughout. The swimming-bath is a very magnificent apartment of Pompeiian character, the water area being 39 ft. by 21 ft. Mosaic columns of the Doric order extend around the hall. The fountain basin at the foot of the stairway is modelled on an example in the Louvre. The mosaic floor upon which it stands is decorated with the signs of the Zodiac.

became more and more simplified, until there was tically no decoration left. The "Queen" was launched ate as 1847—a three-decker, built in the reign of Queen oria! But whereas during the reign of George III e had been at least 300 ship carvers employed in London f, by the time of the Regency this number had sunk to teen. By 1850 auxiliary steam power was being intro- d even into the older ships. It had been in use for e time amongst the smaller and newer craft. The den sides disappeared altogether then, and with them old school of wood-carvers and craftsmen.

me Notes on the Ships Illustrated

"The Berengaria"

Mewès and Bischoff, Architects

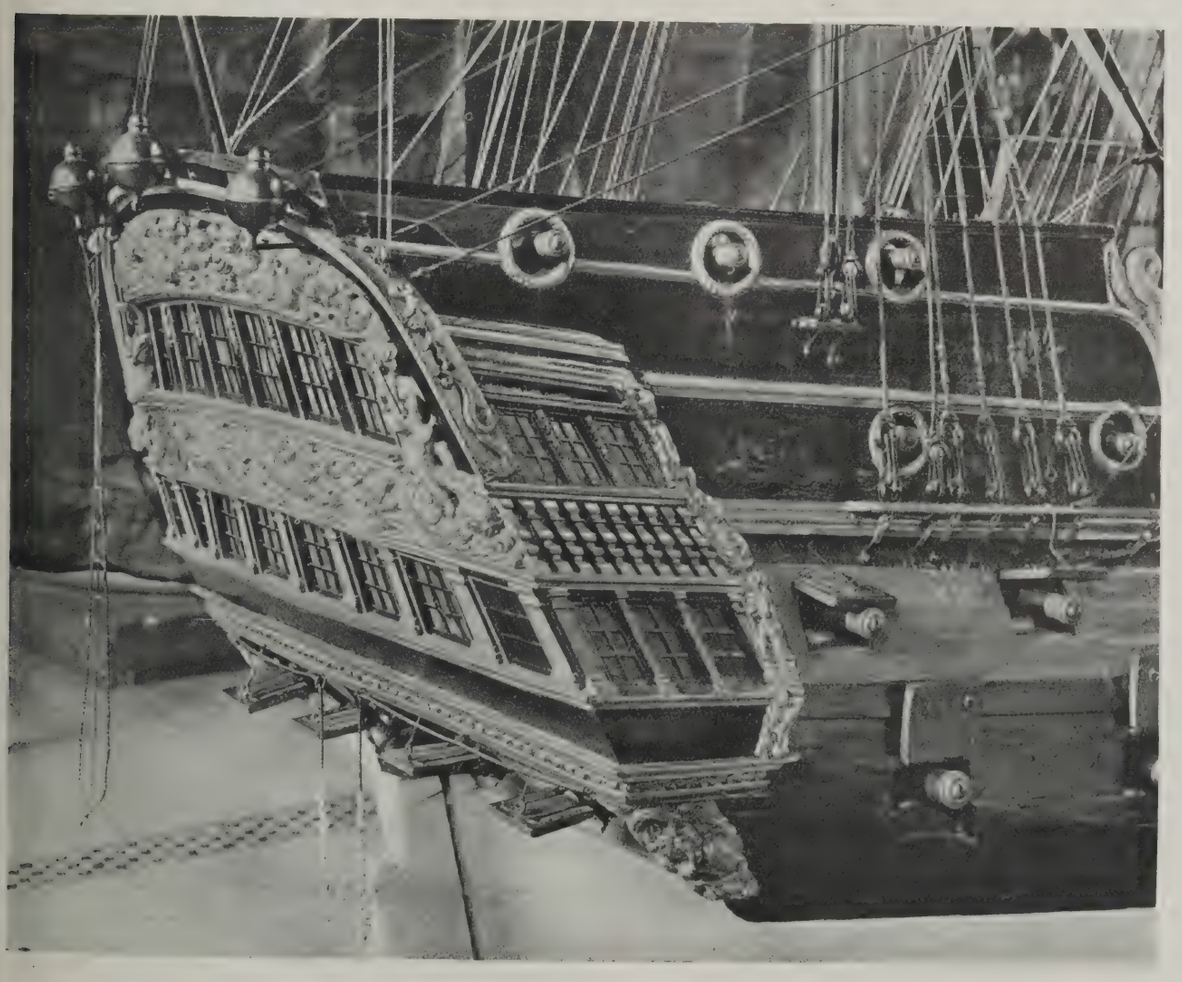
he "Berengaria" is one of the biggest ships afloat, her s tonnage being 52,117. She has accommodation for o passengers and a crew of 1,200. The length over all :1 ft., and her depth from boat-deck to keel 100 ft. 4 in. des being very big she is very gorgeous, her special ures including a palm court, spacious dining saloons, room, swimming-bath, Turkish baths, gymnasium, -room, veranda café, and children's play-room. nitecturally the swimming-bath is the most beautiful g in the ship. It is a jewel in the Pompeian ner, and is reminiscent of the bath carried out by srs. Mewès and Davis at the R.A.C. in Pall Mall. A tograph of one end of the swimming-bath is repro- d as our double plate.

The ballroom and music-room on the "Berengaria" is lighted by a large roof light, and is a magnificent room, as the illustration on page 329 shows. The architects for the "Berengaria" were Messrs. Mewès and Bischoff. The smoking-room was carried out by Messrs. W. and E. Thornton-Smith, of London, and the lifts were installed by Waygood-Otis, Ltd., London. All other contractors were either German or French, as the ship belonged formerly to a German line, and was designed by a French architect. After the Cunard Company took over the "Berengaria," the ship was reconditioned throughout by Messrs. Robson and Sons, Ltd., Newcastle-on-Tyne, who have also carried out restorations of woodwork and furniture in the "Mauretania," woodwork and decorations to first-class and second-class public rooms in the "Laconia" and "Aurania," and woodwork and decorations to the children's rooms in the "Andania" and "Ausonia."

"The Empress of Russia"

G. A. Crawley, Architect

The dining-room on the "Empress of Russia" is in the Louis XVI manner, with many mirrors and a fine painting over the sideboard by Mr. George Lambert. The smoking-room is Louis XIV, and is panelled out in African beanwood. Furniture of the period was supplied by Messrs. Ropley, London. The architect was Mr. George A. Crawley. For the floor surface of the public rooms "Rublino" tiles (supplied by Messrs. James T. Goudie & Co., Glasgow) were used, and Messrs. Elkington & Co. supplied the table plate. The lifts were installed by Waygood-Otis, Ltd., London.



STERN OF A LINE-OF-BATTLE SHIP OF THE FLEET OF THE HANSEATIC LEAGUE, 1650.

(From the Model in the Royal United Service Museum.)

The "Empress of France" (formerly "Alsatian")
G. A. Crawley, Architect

The decorations of the first-class public rooms on the "Empress of France" were designed by Mr. George A. Crawley in the Carolean manner, with the exception of the card-room, which is in the Adam style. The plaster ornaments to the ceiling and to the frieze have been kept low in relief and refined in feeling. The panelling is mouse-grey, with mouldings picked out in white. Around the fieldings of each panel is a honeysuckle border lightly stencilled. The mantelpiece is a reproduction of an old marble Adam mantelpiece, and the overmantel is a gilt and carved mirror designed in the style of the period. The furniture is Heppelwhite, and is very charming. This room was carried out by Messrs. Robson, Newcastle, the plasterwork by Messrs. Jackson, London, and the furniture by Messrs. Ropley, London. The lifts were installed by Waygood-Otis, Ltd., London.

The library is a William and Mary room, panelled in walnut. The feature of this room is the fireplace, mantelpiece, and mirror, which, with its recessed niche mirrored in faceted glass, is of rather an unusual form. This room was also carried out by Messrs. Robson, Newcastle-on-Tyne.

The "Montcalm."
Crawley and Bailey, Architects

The "Montcalm" is one of the latest vessels built for the Canadian Pacific Steamships, Ltd. The cabin card-room is Queen Anne, and is panelled in unpolished French walnut with fine veneered and quartered panels, which have a charmingly variegated effect. On the walls are some very fine line-engravings of the late seventeenth and early eighteenth centuries, by Nanteuil and Davet and others. The architects were Messrs. Crawley and Bailey. The room was carried out by Messrs. Wylie and Lochhead, Glasgow.

The "France"

This ship belongs to the Compagnie Générale Transatlantique, on the Havre-New York service. Her length is 220 metres (about 730 ft.), and her tonnage 24,838. The public rooms are carried out in the most sumptuous manner, as witness the grand salon, illustrated on our half-title page At one end is a chimneypiece with a portrait of Louis XIV, and at the other end a large painting representing the "Roi Soleil" returning from the chase in the woods around Versailles. The walls are divided up into panels by pilasters, enriched with ornament of the Louis XIV period. The ceiling is segmental, with a central dome light and lunettes, and is decorated with modelled plaster figures and delicate frescoes of Sunrise and Sunset, after those by Boucher.

Building Exhibition Stand and Lay-out Competitions

Readers are invited to take part in two competitions which have been promoted with the object of making the Building Trades Exhibition more attractive architecturally. They are invited to send in suggestions for its improvement both in detail—that is, as to individual stands—and in general lay-out.

Prizes as set out below are offered for the designs selected by an assessor (whose name will be announced shortly) as being the best under the two descriptions following :—

A.—A Design for an Exhibition Stand.

B.—A Design for the Architectural Lay-out and Treatment of a Building Exhibition held in Olympia.

Fifteen prizes will be awarded as follows :—

A.—For the Stand: first, £10; second, £5; third, £2; and five consolation prizes of £1 each.

B.—For the Architectural Lay-out and Treatment a prize of £10, one of £5, and five consolation prizes of £1 each.

Competition A.

With regard to Competition A, it is to be assumed by petitors that the stand will occupy a floor space of by 20 ft.

Designs for the stand, made on a single sheet of cartridge or tracing paper, should include plan, sect elevations, and perspective, to ¼ in. scale, drawn prefe in pen-and-ink, though wash rendering will be admissi

Competition B.

The plan reproduced in our issue for February 8 is o last exhibition, and is given merely as an indication o area to be treated. The existing arrangement of gang need not necessarily be adhered to. A plan true to was reproduced last week, and this should be followe competitors in preparing their lay-out schemes. (A bi eye view and elevations and sections may be added if sidered necessary.)

In the likely event of any firm desiring to carry o design on some future occasion the rights of compet remain intact, and designs will be published as copyrig with a note to that effect.

Readers may enter for both competitions, but they not submit more than one design in each.

The name and address of competitors should be under sealed envelope addressed to the Editors, and de should be submitted under a *nom de plume*.

Drawings marked "Exhibition Competition" shoul packed flat or sent in a cardboard roll, addressed to Editors, THE ARCHITECTS' JOURNAL, 27–29 Tothill St Westminster, to arrive not later than first post on Mon March 27. They must be accompanied by the co which is given on page xxxiv.

Full particulars of these competitions were printed i issue for February 8.

STERN OF THE "VICTORY," BUILT 1735.

(*From the Model in the Royal United Service Museum.*)

Correspondence

ification and Registration

To the Editors of THE ARCHITECTS' JOURNAL.

RS,—Mr. Keen writes: "There is y prospect of the Council's actual osals in the matter of Unification g laid before the members of the B.A. long before the next general ing for consideration of the matter." constant attendant at the council ings, this is the first I have heard of it! r. Keen will correct me if I am wrong, my recollection is that the above ect had never been considered by the ent Council until Monday last (Feb- y 20). At that meeting it agreed with resolutions of the Unification and stration Committee, and in doing so cted directly in opposition to the ion of the general body, which by a ority of nearly 33 per cent. was in favour is resolution: "That this meeting is of ion that the conditions for the ication of the profession should form of a Registration Bill, and that the ent system of admittance to the itute, including compulsory examina- should continue in force until a stration Bill be passed."

gain, Mr. Keen wishes us to pause til the Scheme of the Council in il is published." I repeat without of contradiction that the Council has cheme, and has not even discussed a me.

ow as to the chances of obtaining a istration Act, the opinion of any itect should carry no weight; we t be guided by experts. Messrs. wood wrote that in their opinion it ld "be impossible . . . to obtain lation on the lines proposed." I ose a copy of the whole report.*

r. Keen again gives his interpretation ne first Resolution of the Unification Registration Committee. He con- s that only selected and approved itects are to be admitted to the B.A. If so, why call the scheme ication? He wants to do business er a false trade mark.

he R.I.B.A. Defence League has been ned for not waiting for the Report of Unification and Registration Com- ee before calling a meeting to con- r the matter. But that Committee published four important resolutions, they were considered and voted on he Council last year, and surely the eral Body could not do better than w the example of the Council, and ider and vote on those resolutions? General Body has done exactly what Council did, but it has come to an tly opposite conclusion.

ow let us suppose the General Body done nothing until the publication he full Scheme. I submit it would e rendered itself liable to a severe and ectly justifiable reprimand. The ad- ites of the Scheme would have said, e what you have done: you had the fundamental resolutions before you, two years or more ago; you knew ectly well what was intended, no ction was taken, and the Unification and Registration Committee has proceeded exactly on those lines and formulated a complete Scheme, which is laid before you after hard work for many months. And now at the last moment you want to object and upset all their work. If you objected to the proposals in the resolutions, why on earth did you not say so when they were published?" etc., etc.

Every member of the R.I.B.A. who is in favour of the Resolution submitted on the 7th inst., and quoted above, should join the R.I.B.A. Defence League; that resolution embodies all our views. We do not object to Registration, and we do not object to Unification; any Fellow or Associate sending me a postcard would be enrolled as a Member. There is no subscription. Yours obediently,

SYDNEY PERKS.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—As a member of the Unification and also the Associates' Committee, may I crave your indulgence to add to the voluminous literature already published on the above subject?

I should like to take the opportunity of publicly dissociating myself from the views expressed by the proposer and seconder of the "Reactionary Resolution," that was so nearly carried at the last special general meeting of the Institute.

What possible objection can Mr. Cross find to giving the benefit of his views to the Unification Committee, as was suggested in Mr. Buckland's amendment? Not only does he vote against the amendment, but persistently refrains from attending this committee, of which he is a member, thus leaving his colleague, Mr. Perks, in an agrieved minority of one.

Mr. George Hubbard, who is neither a member of the council nor Unification Committee, in seconding the resolution came perilously near to killing his own child! He admits that the creation of the Licentiates class, in which he played such a large part, has brought us not one whit nearer to Registration, yet now that another scheme for Unification is in the making, he will have none of it, although, for all he knows, it may profit by mistakes of the past and ultimately achieve success.

I am aware that criticism of such high personages of the Institute does not come well from an Associate of my humble standing, but when I hear Mr. George Hubbard aiding and abetting such a reactionary policy, it is time for the younger generation to register a protest, even if they are prevented from "registering" anything else.

P. W. HUBBARD, M.A. (A.)

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—As a supporter and admirer of THE ARCHITECTS' JOURNAL from practically its first number, I have recently been increasingly astonished at the nature of references made to those who—with the best of motives, and, in their view, for the soundest of reasons—have felt compelled to oppose the so-called Unification proposals. While one quite understands that—apart from the merits of the question itself—advocacy and support of the Unification policy represents, at the moment, the correct official attitude for the professional press, the language which it is now directing against those who hold different views is incomprehensible if pretentions are made to the exercise of either judgment or fair-play. Your leading article of the 15th instant is an example of the attitude against which I complain. We are regaled with references to the forces of reaction being active—to a sinister snap-vote incident; to gerrymandering; to obscurantist wrecking; and to a species of vulgar professional snobbery that moves our distorted vision to see the Institute merely as a "lodge of the Ancient Order of Pharisees," whatever that may mean. With this, and much more of the same sort, the language of invective exhausts itself in pointing to the crimes of those whose only real offence is to think for themselves and to be honest about it. That, it seems, is not permissible. The sacred cause of unity demands that if some Institute members do not accept the decrees of an outside, composite committee as to how the profession shall be made healthy and vigorous, they shall be brought to reason under the compulsion of language suggestive of the methods of the Inquisition; our only mission is, in fact, passively to allow ourselves to be jack-booted into brotherly love. It is all very strange and bewildering, and we may well wonder what Unity, purchased by such methods, would be really worth.

Is it, one may ask, so completely obvious, as it is assumed to be, that by uniting the Institute (if it were possible) with those who, hitherto, and for a variety of reasons, good and bad, could not or would not join us, the profession will become strong and respected? No such policy as that now being considered has, so far as I am aware, been pursued by a society such as ours in any other country of the world—yet we are to understand that the course now being taken is so obviously right and so certainly calculated to advance architecture as to admit of no doubt or question, and to need no discussion. Is the view held by many, that Unification and Control are impossible except under statutory powers, also to be ruled out of consideration? Is it necessarily to be regarded as of no advantage that, until a Registration Bill is passed, the Institute should continue to stand for what is best in architecture and ethics? That, whatever may be said, was the aim of its founders, supported by the long line of distinguished men who have represented it for over eighty years. Were they also reactionaries or worse? The assumption that all forms of Unity are desirable and that they inevitably bring strength is surely fallacious, for history—ancient and modern—is full of evidence to the contrary. It would be about as safe to conclude that the Royal Academy of Arts would be "strengthened" by large accessions of, say, futurists and house-painters.

No, Sirs, I fear that a pontifical attitude and the assumption of infallible wisdom will not do. Among the advocates of Unification those who think reason and fair-play are preferable to vituperation may yet be found wishing very earnestly to be saved from their friends.

FREDK. R. HIORNS.

owing to the great pressure on our space we are elled to withhold publication of the report referred Mr. Perks.—EDS. A.J.

Correspondence—(continued).

"The Commercial Ideal"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Many of your readers, like your correspondent "Looker On," must feel it difficult to resist giving expression to their views on the intensely interesting subject of Mr. Creswell's recent address. Your leader in the current number of THE ARCHITECTS' JOURNAL shows an understanding of the motives that have been operating in many firms' establishments during the past few years.

Ruskin, it will be remembered, showed that the soldier was honoured because he was prepared to lose his life, and that the business man is not honoured because of his want of self-sacrifice. When business men have unselfish ideals, then they have a right to make use of the highest art obtainable. That there is a spirit of unselfishness in business to-day is evidenced by recent reports of company meetings, where it has been shown that sections of works have been kept running at a loss to prevent unemployment among the workpeople.

No object as long as it is honest and useful should be considered unworthy of the most artistic treatment obtainable, even though it be a "municipal bath or dust incinerator." The Greeks and Romans were particularly successful in their treatment of the former.

W. M. HILL.

Viscount Knutsford on the City Churches

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I have to thank you for defending me more effectively than I could have defended myself. Little remains for me to add, and as I enjoy the humour that at my expense adorns Lord Knutsford's letter, I refrain from attempting to score one or two points for which he has given me the opportunity. He must let me say, however, that I have not suggested handing these churches over to the Y.M.C.A., or, indeed, contemplated such a thing; but I do want the clergy to show a little imagination and resource in finding proper uses for them.

Lord Knutsford states that he does not realize the value that these buildings have in the eyes of those who appreciate their beauty and associations. Very well; we must leave it at that, and merely assure him that this value is as real a thing as the value of literature or music. The churches are an element in beauty that not only gives pleasure at the moment, but that has a permanent influence on life and character. Lord Knutsford will admit the depressing influence of a town of the type of Hanley and the uplifting effect of a city like Oxford or Warwick. He will probably admit that the view of Bow Steeple as seen down Cheapside from the east is one of the finest things he knows of, and that the view of St. Paul's from the north-east is probably not surpassed anywhere. Just as he sees beauty in these things, so some of us find charm in places and buildings that appear not to have reached him yet.

London commonly lacks the active light that beauty lives on, but the abolition of coal-smoke is among the possibilities of the near future, and when it happens the charm of London will become apparent to all. The American whom I quoted is only one of numberless people who already look at London as a beautiful city, and who deprecate the destruction of any of the elements of its beauty.

I have no patience with proposals for moving churches bodily or taking their fittings into other buildings. Treated in this way things become a sort of museum specimens and lose the quality that belongs to them as part and parcel of the building or place that they were made for. Look at it as you will the church is a part of an ancient city left to tell its tale in the present day, and the warehouse that takes its place is only an item in a commonplace commercial town. There may be some sentiment in it; there is sentiment in most things that have any great value.

Yours faithfully,

ARTHUR KEEN.

The Stone Carvers' Wages Dispute

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Just now, when it is the national desire and duty of all concerned to lessen the cost of building work, a serious crisis has arisen between the master stone carvers and the men, resulting in the stoppage of all stone carving at the present moment.

The stone carvers during the abnormal circumstances arising out of the war obtained greater increases than any other profession. These increases were given on a signed agreement for the period of the war and nine months after. The employers have no wish to put the men back to pre-war conditions, but would rather foster a higher standard of craftsmanship by offering increased remuneration, and this they are prepared to do. There is, however, no justification for the inflated rates now paid.

Stone carving is a luxury profession, and can easily be dispensed with. It is not to the craftsman's interest to make his work prohibitive; and when architects find that all other of the building crafts have reduced their rates in accordance with the fall in the cost of living, they will naturally blue-pencil any external decoration on their buildings, which is what is largely happening at the present time.

In 1914 the stone carvers' minimum was 1s. 1d. per hour; to-day it is 2s. 10d., while for extra merit men are paid up to 3s. 6d. per hour or more. The cost of living to-day is 92 per cent. above pre-war level; the employers asked for a very moderate reduction of 3d. per hour, and offered to stabilize wages for twelve months. This the men refused; the employers offered to leave the matter to the Court of Arbitration, but this they entirely ignored; consequently, as the negotiations had been in hand since last June, the employers took a firm stand, with the result that there is a complete stoppage of stone-carving work in London to-day.

The employers have always prided themselves on their amicable relationship with their men, and it is a matter of great concern and regret that a craft requiring such individual skill and personality should be involved in any dispute of this sort.

As this stoppage of work must cause considerable inconvenience to arch and builders with important contrac hand it was thought best to ex through the medium of the Pres exact cause of the dispute leading the present state of affairs.

W. AUMONI

Hon. Secretary, The Master Ca Association of London.

The Policy of the Sch

To the Editors of THE ARCHITECT JOURNAL.

SIRS,—In view of the general di sion which has been taking plac cently in connection with the nur entering the architectural profession the suggestion made that the schoo unduly encouraging students to a profession in which there is little c of their obtaining a reasonable liveli owing to its already overcrowded the Council of the Architectural As tion has asked me to issue the follo statement as to the steps taken to e that only those who show an apt for architecture, and are likely to be efficient and useful members of the fession, are allowed to enter or re in its schools.

In the first instance, no candid application for admission will be sidered unless he or she has attain a good standard of general educa equal at least to the Senior Oxfo Cambridge Local examination, or Lo Matriculation. Applicants who pro the necessary evidence of having rea the standard of general educatio quired, are interviewed, and at advised if it is considered that the not fitted for the architectural profes

Approved candidates are allowe sit for the entrance examination, w consists of the following subjects:—

1. English Composition.
2. Freehand Drawing from the Ca
3. Mathematics (Algebra, Quad Equations).
4. Geometry (Intersections of Soli

A "Pass" must be obtained in su 2, and in any two of the other rema subjects.

It is not suggested that the examina is an infallible test of the candid suitability, but it does afford an op tunity of obtaining at least some in tion of the ability and type of min those sitting for the examination, a fairly broad view is taken in arriving decision as to which candidates are t admitted, and which not.

Those entering the School, do so year's probation, and if they do justify their admission during that pe they are asked to leave, and are adv to take up some other calling.

I think it will be seen that it is no easy matter for a student to enter Schools, and that it is not the case admission is granted haphazard to one who cares to ask it, irrespectiv suitability for the profession of arch ture.

If the architectural profession is c crowded, it is certainly not overcrow with well-trained men, and as evid of this I may state that even during worst times there is little or no diffic in obtaining paid employment for t leaving our Schools on completion training. Yours faithfully,

WILLIAM G. NEWTO

Presider

Magazines of the Month*

A Literary and Pictorial Digest

The reading of Sir Lawrence Weaver's ('Lutyens Houses and Gardens') me almost immediately to Hamp- d Garden Suburb to refresh my nory of St. Jude's Church," says A. R. ys, writing in the February LONDON CURY. "The tower standing on the sing is as perfect a piece of brickwork as been built in recent years. . . . mounting the whole is a leaded spire ng thirty-two facets, built with just right amount of entasis, certainly finest thing of the kind done since the ormation. The feature that gives tower its remarkable originality is setting of the octagonal top and the ress piers which connect it with the re substructure. An architect," he on, "seeing the building for the first on a fine day will wonder by what t contrivance the rainwater is con- ed from the roof, and at the same he will be surprised to notice how kly the walls are acquiring the mel- ness of age. The two things are ly connected. For although the s are 11 ft. from the ground, Sir in Lutyens allows the water from the surface of the roof to fall over a e cornice to a gutter at the foot of the . The consequence of this is that the walls and the stonework are kly acquiring a covering of mossy ths. There is yet but little sign either this stonework or the joints of the brick walls are suffering from this usage. Inside, the least satisfactory parts of the design are the rather unconstructive roofs of the side aisles. Not only do the supporting timbers of this roof look a little strange and confusing to the amateur, but the professional is set wondering how the side walls, although they are some 3 ft. thick, can resist the thrust of a roof so framed. . . . St. Jude's Church is very nearly a perfect conception in the characteristic manner of its architect. Were I to state the intention that seems to underly this manner I should do so by saying, 'Please the senses of your audience and endeavour to give it a building that will serve its purpose.'"

*All the above magazines may be seen in the Reading Room at 29 Tothill Street, Westminster.

The February ARCHITECTURAL REVIEW is, as usual, full of good things. In an article on "Rye, in Sussex," the writer, Helen Ashton, describes the town standing "up in the marsh like a pyramid, with all its red roofs crowded together, and topped by the tower of the church." Lamb House, in Rye, was the home of Henry James. "On the doorstep the artists perch in rows in the summer, like sparrows on a fence, immortalizing the angle of the church and the fifteenth-century cottage he bought up for fear anyone should renovate the curve of its tottering chimney-stack." Rupert Brooke called on the great man with a friend at 9 o'clock at night, and after much hesitation "pressed the bell of the Great Door," but without effect. "I pressed again. At length, a slow dragging step was heard within. It stopped outside the door. We shuffled. Then, very slowly, very loudly, immense numbers of chains and bolts were drawn within. There was a pause again. Further rattling within. Then the steps seemed to be heard retreating. There was silence. We waited in wild, agonizing stupefaction." After that there were shuffling noises, a shadow passed across the lighted window, and a low whistle came from the house. But the doors remained shut, and the two stole away shaking and wondering if the evening papers would tell of Henry James's murder. The illustration shows the fifteenth-century cottage and the tottering chimney-stack which so fascinated the novelist.

In the same issue there are articles on "Saxon Survivals in the Smaller English Church," on "Cubley Village, Penistone, Yorkshire" (whose architect is Herbert Baker), on "Chastleton House, Oxfordshire," and on "Antoine Louis Barye," the "Michelangelo of the menagerie," whose name as a sculptor is hardly recognized on this side of the Channel. He was born in Paris in 1796 (a year after Carlyle was born in Annandale), his father being a jeweller in Paris. In 1812 he was swept into the army where he was employed modelling plans in relief, but escaped two years later and entered the *atelier* of Gros, obtaining in 1820 the second Grand Prix for sculpture. Seven years later he

RYE: VIEW FROM HENRY JAMES'S HOUSE

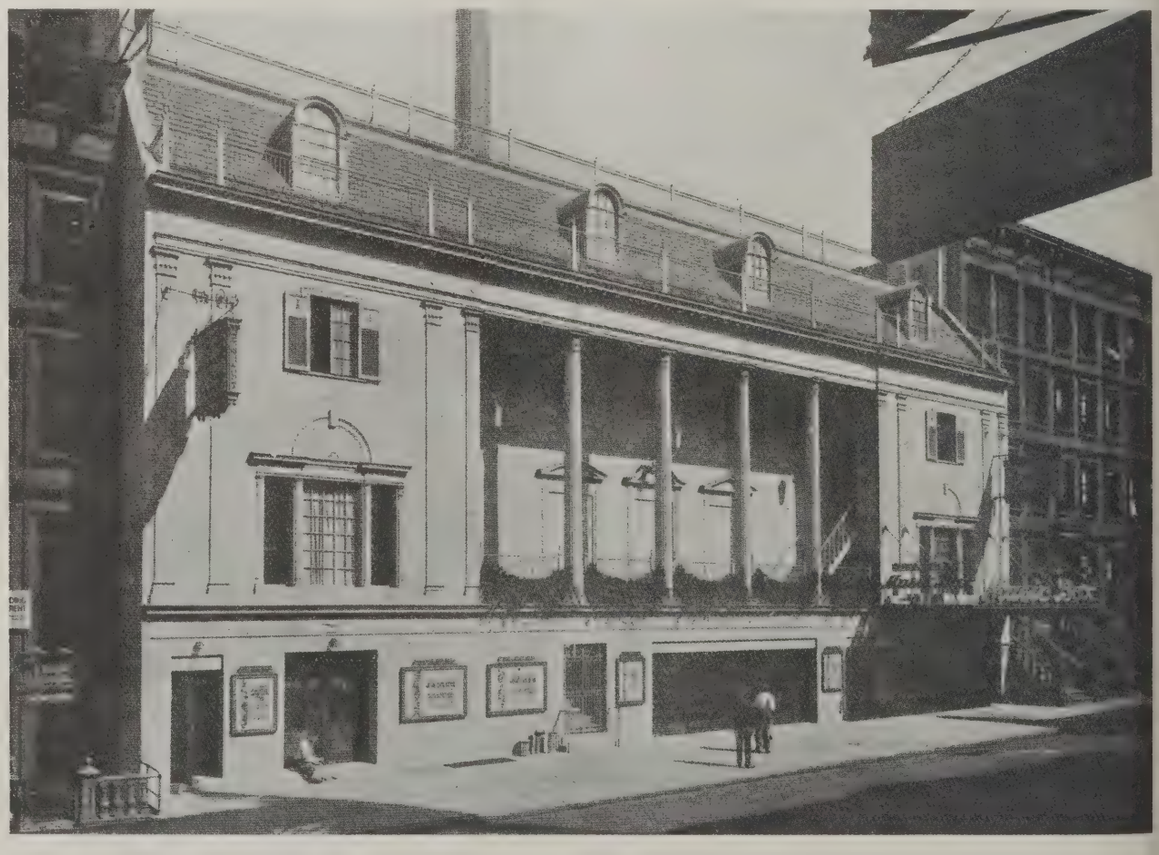
(*From "The Architectural Review."*)

sent his first exhibit to the Salon, and in 1883 gained the Croix d'Honneur for his "Lion devouring a Serpent." In 1854 he became Professor of Designs, but it was not until his death in 1875, when an exhibition of his works was held in the Ecole des Beaux-Arts, that Barye began really to be recognized as a master. "Animal life was to him an obsession," says Beresford Chancellor. "At the Jardin des Plantes he watched, day by day, the animals' varying moods: their fury, their playfulness, their lynx-like observation, their curtailed strength, their ferocity and their restless involutions. . . . His profundity of observation was only equalled by his strenuous accomplishment; simple in his life, his glory remains for ever."

"Art in Common Life" is the subject of an article in THE NINETEENTH CENTURY for February, by Mr. Frank Pick, of the Design and Industries Association. There is no age without its art, he says, therefore art must exist in modern life; but the puzzle is where to look for it. In the recognized abodes, art is conspicuous by its absence. Do we find art in the churches and chapels? Most certainly we do, but only in old churches and chapels. Turn to any modern religious building. Compare Lincoln Cathedral with Westminster Cathedral. The one, he says, "is built out of the lives of men . . . . It stood in the midst of life and said something." The other is "frankly copied from Byzantine models. This is no document of modern life. It is a translation of life now dead, graceful and learned, but palpably alien to London." Religion to-day is expressed by the hundreds of new churches and chapels all over the country, which at the best are respectable and commodious, at the worst drab and stuffy. This is the measure of modern religious thought. To-day religion has lost its old importance. We must look for art amongst the things that matter. "Do pots matter? Not a bit. The cook and scullerymaid break them. We buy more. . . . Do buildings matter? Not a bit. Else why allow a jerry-builder to knock up rows on rows of tenements of marvellous exactitude of appearance, relieved by a startling public-house at favoured corners? Else why stick a fancy front on an otherwise plain building to deceive the street? Yet some things matter. . . We have tennis rackets, cricket bats, croquet mallets, and so forth, for the strife of sport. Size, shape, weight, quality, substance, workmanship, all are considered, so that in the result there is beauty sprung from soundness of material, from elegance of form, from perfection in use. . . . Then we have motor-cars. Think of the earliest cars with their wooden wheels borrowed from horse carts, their gig-lamps, their open sides and narrow stiff seats; and contrast them with the pneumatic-tyred, stream-line bodied enclosed car of deep upholstered seats that we now know. It reveals a process of evolution akin to Nature's. The lines are natural and severe, unbroken for effect, emphasized with slender streaks of bright paint. . . Where ornament fittingly came, appeared, as in the radiator cap, inc tive of the owner's fancy. Then we l sailing yachts. It is strange how things that matter turn on sport. lines of hull and sails are not artist's l are not really designer's lines. They found in seeking spread of canvas speed. They have the beauty of sig cance." From the above illustra and several others the writer draws clusions which, put briefly, are as follo Art lies (1) in the accomplishment purpose; (2) in the satisfaction of s use; (3) in the creation of a design is, in thought); and (4) in the expres of an idea.

The February JOURNAL OF THE R.I contains the President's "Address Students," a "Review of the Work mitted for the Prizes and Students 1921–22," by Theodore. Fyfe, Profe Rothenstein's address on "Architec Draughtsmanship," and an appreci of Ernest Newton, by Paul Waterh

THE AMERICAN ARCHITECT AND AR TECTURAL REVIEW for February 1 tains views of a new house designed i Tudor manner by J. T. Windrum, a tect, an article on the "Designin reinforced concrete columns," and illustrations of the "Music Box Thea New York, which is interesting bec it shows an adaptation of the Col style to theatre design. An illustra of this theatre, whose design so suggests its name, is shown below. main façade consists of a loggia slender columns supporting the roof,



MUSIC BOX THEATRE, WEST 45TH STREET, NEW YORK. C. HOWARD CRANE, ARCHITECT.

(*From "The American Architect."*)

PTOWN BRANCH BANK, NEW YORK. McKIM, MEAD, AND WHITE, ARCHITECTS.
(*From "The Architectural Forum."*)

ked on each side by pavilions with a
adian motif. It is built of Indiana
stone. The colour-scheme of the
itorium, which seats 1,000 people, is
antique ivory, glazed in soft green.
lighting fixtures are of Dutch brass
amber crystals. The dressing-
ms have received as much care in their
il, finish, and lighting as that part
he theatre used by the public, which
ses the actors, but should also please
public. The feeling when one enters
eatre that only those parts which are
are decorated leaves a distasteful
ression of the "Whited Sepulchre,"
ch does not at all help towards the
yment of the piece.

llustrations of a new building, by
rles A. Platt, appear in the January
HITECTURAL RECORD, of New York.
s is the Hanna Building, Cleveland,
o, of which a photo of the main
rance appears opposite. It would be
d to find anything simpler or more
ctive than this great Italian arch with
heavy keystone connected to the
ustrade above. The stonework, too,
been cleverly designed in combination
h the windows to prevent the eye from
g captured by the height of the build-
which is 150 ft., and consists of four-
stories. The decorative pattern
s formed by the stonework "gives
whole façade the effect of a vivid and
asing screen. In practically all the
ldings on city streets which Mr. Platt
designed, he has used a variation of
same general idea."

Other articles in the same issue deal
h "Architectural Polychromy"—the
ditions which control the introduction
colour into architecture; an Italian
a, "Poggio Torselli, San Casciano,"
ich is described by H. D. Eberlein;
endencies in Apartment House De-
"; and a fascinating old French farm,

MAIN ENTRANCE, HANNA BUILDING, OHIO. CHARLES A. PLATT, ARCHITECT.
(*From "The Architectural Record."*)

"La Rabaterie," which lies on the outskirts of Tours, and was built during the fifteenth century. In its "Portfolio of Current Architecture," THE ARCHITECTURAL RECORD also gives a general view of the Travellers' Insurance Building by Donn Barber, which we illustrate as depicting very clearly the new steeple-like tendency in high buildings as contrasted with the old-fashioned boxes with heavy cornices

The February PENCIL POINTS, of New York, contains articles on "The Study of Architectural Design," which deals with character in planning; "Twelfth-Night in Mr. Goodhue's Office," "Architectural Detail, Part X," and "Perspective Drawing, Part XX."

In THE ARCHITECTURAL FORUM, Boston, for January, McKim, Mead and White's "National City Bank Building" is illustrated. We reproduce a view of the smaller public space opposite the entrance. The floor of the public space is of Knoxville marble with Travertine borders and steps. It is covered by a coffered ceiling of ornamental plaster, the working spaces having floors of cork tile, and the carpeted spaces on platforms, cement floors with Travertine borders. The public space has on one side of it the platforms for the officers of the bank, separated by marble balustrades with bronze gates.

The same issue deals with "Some Ideas on Bank Buildings—Artistic and Practical," "Systems for Building Heating and Domestic Hot-Water Supply," "The

Villa Velluti at Mira Vecchia," "Concrete in the Field," and "Scale in Interior Architecture."

CONSTRUCTION, Toronto, shows views of a country house, of the "Temple Building, Toronto," of the "General Accident Assurance Co.'s New Building," designed by F. S. Baker, F.R.I.B.A., and of the "Saskatchewan Government Mental Hospital."

Art Exhibitions

Mark Gertler

The new series of paintings which this artist shows at the Goupil Gallery may or may not meet with everybody's approval, but anyone interested in painting will have to admit its ableness and the sincerity that went to its making. Like all artists, Gertler has a mannerism of his own; his oil-paintings look very woolly, and there is no denying that, when it goes unnecessarily far, as it does here and there, a somewhat disagreeable feeling is the result. But this granted, there is really little else with which to cavil. It has been said that this artist is among the first half-dozen English painters; such a claim is perhaps a little forced, but his place is probably carved out of the main block of foremost painters. In a way, this exhibition confirms our former suspicion that Gertler is obstinate and thorough. A methodical enthusiasm leads him to but few departures, but what he still explores is made charming by the fervour of his efforts.

The twenty-one exhibits come under three heads: landscapes, still-life, and portraits—a classification, when you come to think of it, covering pretty well the whole field. But Gertler has a peculiar outlook on life and beasts, and the very wilful limitations he imposes upon himself give an undeniable distinction to his work. Out of the six still-life, for instance, three deal with groups of porcelain. One is called "The Jockey" (7), another "The Sailor and his Lass" (9), and the third "The Hunter" (11). No tricks. Just a faithful and loving imitation; yet, somehow, a Russian Ballet feeling creeps in here and gives us a delightful thrill, as if meeting dear old friends.

The portraits are vigorous and unsophisticated, the "Scottish Maid" (14), all buxom and red cheeks, being the most typical. In "Portrait of the Artist" (21) one learns a lot about Gertler as a man and as an artist; one sees his keenness, his ability to visualize, and his power to paint straightforwardly. But his landscapes are the most valuable contributions. They, too, are forcible, well arranged, and a kind of muffled joyousness seems to sing through them all, with wind, sun, and a pantheistic blare all thrown in by hand and eye. "The Pond" is a little masterpiece, but the "Irish Yew" runs it rather close, and between these two one pauses, in the positive knowledge that here, at any rate, one is actually looking at exceptionally nice stuff.

Water-colours by Cecil A. Hunt, A.R.W.S., the Fine Art Society, New Bond Street.

It is clear Mr. Hunt saw his limitations years ago, and rather than imitate the convolutions of the ultra-moderns he has wisely chosen to work within definite and narrow borders, a course we wish more artists of his class would follow. As there are no impossible ambitions to whip up, there are no strains observable in his work. Mr. Hunt deals with well-balanced landscapes chiefly, and this he does uncommonly well. And what a pleasant life his must be!

Looking through the sixty-seven numbers of the catalogue of his water-colours, one sees that he is a painter and a vagabond all at once. Kemmel Hill, Carcassonne, Devon, Sicily, Yorkshire and the Eastern Pyrénées, and Tunisian landscapes and the Dolomites, they have all been visited, and all have had to bow—so to speak—to Mr. Hunt's insatiable industry and accomplishments. To be candid, one soon tires of his landscapes and skies in body colour. There is no structure behind them; it is a mere fine veneer; they are just anecdotes, done with plenty of vim, and done rapidly, for Mr. Hunt is evidently a great favourite with a certain section of the moneyed public, and he may believe in mixing business with pleasure. Somewhere in the "S of Venice" Ruskin talks of the pures most thoughtful minds being those love colour the most; but this is partly true, as Mr. Hunt's art will p for colour he likes, and he often lik pungent, but one would not say tha art is always thoughtful or pure.

A modern gallery of art sees str bedfellows in the way of pictures. greater contrast could be imagined the one obtaining between the plea water-colours of Mr. Hunt and, in ante-room preceding their exposure eager and splendid oils of the W. Strang? G. HO

TRAVELLERS' INSURANCE CO. BUILDING, HARTFORD, CONN.
DONN BARBER, ARCHITECT.
(*From "The Architectural Record."*)

Publishers' Strike

Any subscribers who failed to re THE ARCHITECTS' JOURNAL last w owing to the publishers' strike, sh let us know, and we will take steps t that a copy is sent to them. We r regret that any miscarriage should occurred.

ittle Things That Matter. VI—Miscellaneous

By EDWIN GUNN, A.R.I.B.A.

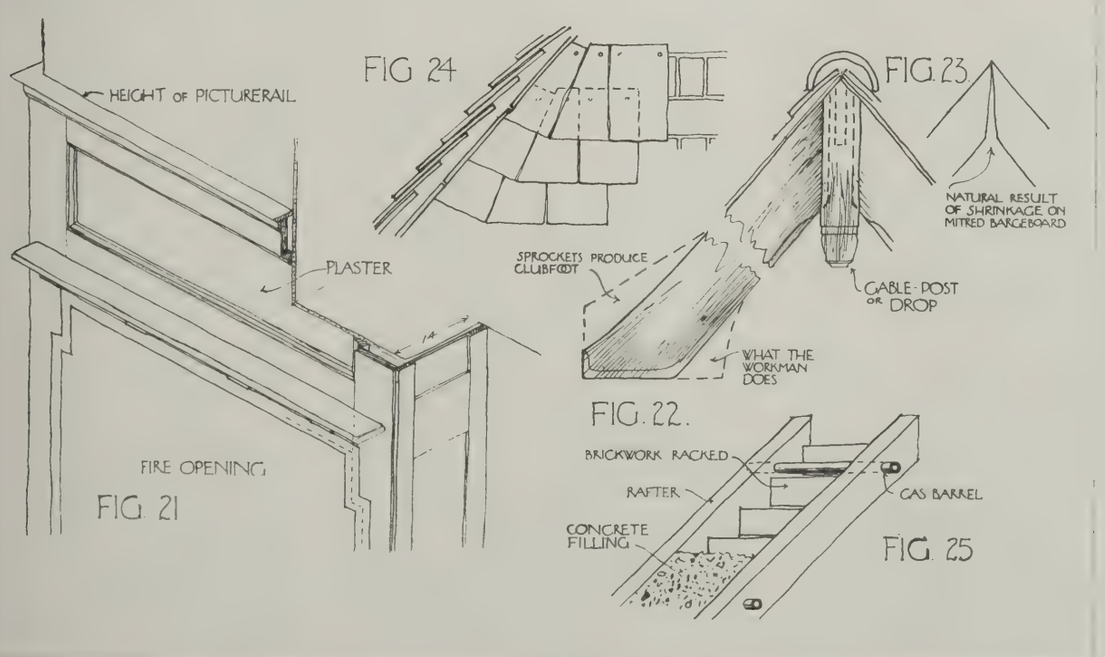
no detail of the humble domestic nterior, which yet aspires to be some- hing rather more than a cottage, is opportunity for a distinctive treat- more constantly neglected than in fireside, and that notwithstanding reat improvement which has taken in the quality of the design of the al feature—the grate—which is now nercially obtainable in many simple agreeable forms. This neglect is cularly the case with regard to those ney openings—the most common— ng projecting breasts. A great addi- to the "character" of the room is when the chimneypiece treatment read over the whole of the face and ns of the projection, rather than as a h on the centre only. The broaden- ffect of a suitably designed chimney- on the lines of Fig. 21 on the apparent of an apartment, as contrasted with inimizing effect of the commonplace ntel," is very great. Such a chimney- can be made up quite cheaply by joiners from permutations of the trave, picture rail, and other mould- —the long deep panel over the being plaster, on the wall surface. protection of the salient angles of breast by the panelled return is worth achieving, for this point e all others seems most subject to ıge.

rgeboards.—The bargeboard suffers excesses committed in a previous and is a discredited feature. It is, rtheless, often a sensible and service- thing to use—as, for instance, in con- ion with weatherboarded or tile- gables. In both of these cases it is ult to make a workmanlike finish ıst the verge, and in the case of weatherboarded gables it is highly desirable to arrange cover (such as the bargeboard affords) for the scribed ends of the boards. These always show open joints from shrinkage if not so covered. The points about bargeboard design to be remembered are: (1) that the foot is likely to be quite sufficiently clumsy if the eaves are carried out in the simplest and most direct way without expanding the bargeboard unnecessarily downwards (which workmen love to do!), and that when considerable sprockets occur at the eaves of a roof the bargeboard ceases to be manageable. See Fig. 22. (2) The purpose of a gable-post (always introduced in the best periods of carpentry) was not the provision of a spike on the apex. With the fashion for spikes the gable-post has often dropped out too; it is in fact a practical and workmanlike expedient for jointing bargeboards and ridge. Think of any other way in which this joint can be made, and the fact will be apparent (Fig. 23).

Weatherboards.—Elm weatherboarding has come into greater prominence during the shortage period succeeding the war. Its appearance is pleasant, but its use is full of pitfalls. The well-known property of this timber—endwise shrinkage—is its most awkward characteristic, but its great twisting force is also difficult to restrain. From a considerable experience of its use I would say (1) always use the waneyedge boarding, but start from the bottom with a straight-edged board; (2) use nothing less than $\frac{3}{4}$ in. thick—1 in. is better; (3) if the weather is to be excluded lap the joints at least 3 in. (to allow for shrinkage) and underline; (4) nail with 4 in. wrought flat-headed nails; (5) fix as soon as possible after sawing up—before the boarding has a chance to twist; (6) obtain boards in long enough lengths to cover from corner to corner or opening to opening without end joints. A butt joint occurring on a stud provides insufficient space for nailing—the nails close to the ends tear or break loose as the boards shrink and twist. Featheredge elm boards are not a success.

Weathertiling. — Where tilehanging runs out against a gable there is always difficulty in fixing the triangular pieces of tile next below the verge. The old way of overcoming this is seldom tried, but cannot be improved on. In each course the *two* end tiles are cut fan-shaped instead of one only being triangular; by this means each will preserve a nail hole, and fixing is easy, while the upward kick at the end of each courseline is very pleasant in effect (Fig. 24).

Party Walls.—Since the fortunate abrogation of the model by-law calling for parapets to penetrate roofs, it is a common sight to see the brickwork of party walls apparently bursting up through tiles or slating at this point owing to shrinkage of rafters, purlins, etc. This effect can be minimized by the use of $\frac{1}{2}$ in. gas barrel dowel-corbels to support and connect the rafters on either side of the wall as shown in Fig. 25. The brickwork is roughly racked back to a line between the rafters, which are drilled with a $\frac{3}{4}$ in. bit at about 4 ft. centres, and threaded with 14 in. lengths of barrel. The intervening space is then packed solid to line of boards or battens with fine concrete, upon which tiles or slates are bedded where crossing the wall. This reduces the effects of shrinkage to a gentle swelling rather than a sudden hump.



Royal Academy Mural Decorative Art Exhibition

The President and Council of the Royal Academy, with a view to promoting the arts of design connected with the decoration of buildings, propose to hold an Exhibition of Decorative Painting and Sculpture at Burlington House in January and February, 1923. The exhibition will have a twofold object: in the first place, to direct the attention of the public, and especially of those who are concerned with the erection and adornment of public buildings, to the important part which the arts of painting and sculpture should take in architectural schemes, by showing what British artists can contribute to this end when suitable opportunities are offered to them; and, secondly, to suggest to younger artists and students the great possibilities of these decorative arts for the expression of the thoughts and feelings of the community at each turning-point in its history.

The Royal Academy Schools have recently started the study of decorative painting on a large scale, and other schools of art are working in the same direction. The President and Council think that the time has now arrived for a public review of our resources and openings in this field of art, and they therefore hope that civic authorities throughout the country will take a prompt and practical interest in the scheme of the exhibition, which will include works in painting, mosaic, tapestry, or sculpture for the permanent decoration of buildings, and designs or cartoons in drawing or painting, models in plaster, etc., for such decorations. They are confident that with suitable encouragement many of our younger artists will be found capable of carrying on and developing the great traditions of these once honoured, but now neglected, arts.

Decorations designed as suggestions for imaginary buildings or spaces would be acceptable for the exhibition. At the same time, with a view to the practical encouragement of artists in this direction, the President and Council would be glad to know of any schemes of decoration which municipal or other authorities either intend or might find it possible to put in hand, and would hope to receive information, with details of the measurements, lighting, etc., of any definite spaces in buildings which would be available for decoration with subjects of local or national interest by an artist or artists selected by open competition; it being understood that such authorities would not be bound in any way to accept any of the competing designs.

The London County Council has agreed to place certain wall spaces in its new County Hall at the disposal of four of the principal art schools of London, for decoration by the students under the supervision of the masters of the school. The Committee of the British Empire Exhibition, 1924, will also, it is understood, provide a large extent of space for mural decoration in the new exhibition buildings at Wembley Park. It is hoped that other municipal authorities will follow these examples.

The modern understanding of the high position and value of mural decoration—of its part in the rhythm and harmony of an architectural design, and its power of commemorating the spirit of a race—is immediately due to the work of Puvis de Chavannes in France. But it should be remembered that he was only reviving, though with the peculiar force and freshness of his genius, the spirit of decoration as it was known to the mosaic artists of the Byzantine period, to the mediæval artists who adorned our cathedrals with painted and sculptured scenes from sacred and national legends on roof and wall and window, and to the great Italians of the Renaissance whose frescoes and reliefs play so splendid and yet so integral a part in the effect of the churches and palaces of Florence, Venice, Rome, and other famous cities. By means of these decorations the arts were made a source of inspiration to everyone. Their influence was blended with the daily purpose and use of each building, and made itself felt by a quiet and habitual impression; they were thus accepted as an essential part of an æsthetic and social education which continued, as a matter of course, throughout the life of the ordinary person.

It is something of this spirit that the President and Council of the Royal Academy desire to see revived, and they hope that suitable opportunities may be found for its realization in our public buildings. All communications should be addressed to "The Secretary, Royal Academy of Arts, Piccadilly, London, W.1."

Mr. Waterhouse on Unification

Mr. Paul Waterhouse, P.R.I.B.A., in the course of an address to the Northern Architectural Association, said that perhaps nothing within the purely British sphere of the Institute had shown the solidarity and brotherhood of the corporate body more clearly than the movement towards unification. There had been some misunderstanding about that scheme, and he wished to make it clear that it was not a scheme started by some faddist in London, or that it was fostered by the Council in London. The scheme had its origin amongst the general body of the profession.

To his mind, said the President, unification was a fine thing, though the scheme might be complex, and might involve the sacrifice of some principles.

Everybody had a right to express their opinions, but he felt that the critics of the unification scheme had launched their criticisms before the scheme was born. He therefore proposed, with the approval of the Council, to issue a statement upon the whole movement.

Whilst holding definite views upon unification, his duty as President would be to see that the prestige of the Institute was not in any way let down; that no class in the Institute was prejudiced beyond the extent demanded by the spirit of sacrifice. Something had to be given up, but it was his duty to see that the something was not excessive.

Mr. T. R. Milburn, President of the Association occupied the chair during the meeting, which was held at Newcastle. Introducing Mr. Waterhouse, Mr. Milburn said that a visit from the President of the R.I.B.A. marked an epoch in the history of the Association.

R.I.B.A. Council Meeti

The following notes are from Minutes of the last meeting of the Cou of the R.I.B.A. :—

Unification and Registration.—It reported to the Council that at the mee of the Unification and Registration C mittee held on February 7 at the R Institute the following resolution carried by thirty votes to one : "That meeting of the Unification and Regis tion Committee reaffirms its resolutio May 12, 1921, that the principle of Sch A, namely, the bringing of all archit in the United Kingdom into member of the R.I.B.A., be adopted as the b of Unification," and it was resolved the resolution be approved by the C cil of the R.I.B.A. (As there has widespread misunderstanding on subject of the proposals for the Uni tion and Registration of the architect profession, which are now being sidered by the Associates' Committee the Unification and Registration C mittee, the Council have given inst tions that a brief explanatory stater shall be at once prepared and issue members.)

The University of Manchester Sc of Architecture.—The five years' cou of the School of Architecture of Manc ter University have been recognized exempting from the Final Examina on the usual conditions.

The R.I.B.A. Prizes and Students —The Council have adopted the follo recommendations of the Board of A tectural Education :—1. That no w submitted shall have been prepared du the competitor's day school hours That students shall receive no criti or assistance from their school or at instructors in making their designs That a student successful in a Trave Studentship Competition shall be g personal advice by the jury of that c petition before travelling, and shal recommended to wait until he has rea the age of twenty-three years before ta up his Travelling Studentship. 4. Th student successful in a Travelling Stud ship Competition shall be given two-th of the money prize before beginning travels; the remaining one-third to handed to him on the satisfactory c pletion of those travels. 5. That student successful in the Pugin Trave Studentship Competition be require make a tour of six weeks' duration ins of eight weeks. 6. That the stu successful in the Henry Jarvis Trave Studentship Competition be perm to spend his second year in some cou other than Italy or Greece, if he so de subject to the approval of the Fac of Architecture of the British Scho Rome.

The Celebration of the 150th Ann sary of the Académie Royale de Belg May 24, 1922.—The following men have been appointed to represent R.I.B.A. at this celebration. The P dent of the Royal Institute, Sir Reg Blomfield, R.A., Past President, Mr. W. Simpson, Past President, and John J. Burnet, A.R.A.

Special Election to the Fellowsh Under the provisions of By-law 12 following architects were elected Fellows by the Council: The Rt. Earl Ferrers and Mr. F. C. Eden.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Sir Charles Ruthen and Architects.

Ir. Hopkins, in the House of Commons week, asked the Minister of Health ether his attention had been called to address entitled "The Architect and State," which was delivered to the iety of Architects on January 12 by Director-General of Housing, and at action he proposed to take in the tter?

ir A. Mond, in his reply, said that his ntion had been called to the address, which he gathered that the Director-neral suggested that the architects and ers had not fully availed themselves the opportunities which their partici-ion in the housing scheme afforded m. He was afraid there was ground thinking that this was true of most of parties concerned in the housing eme, and he did not think that any on on his part was required as re-ded the Director-General of Housing, ose services had been of the utmost ue to the State.

No Further Control of Building.

eplying to Mr. A. Williams, Sir A. nd stated that, in view of the large gramme of housing still to be com-ed, and the continued reduction in es, he hoped that further State inter-tion in any form would not be re-ed, and that the building industry uld return to its pre-war economic s.

Housing Progress and Costs.

ir A. Mond informed Mr. Charles vards that the number of houses in-led in contracts approved by him was 330. The average tender prices were ollows: Prior to June 30, 1921, £815 £917 for non-parlour and parlour ses respectively; for the period June 30 December 31, 1921, £593 and £684; during the current year £478 and 4. The right hon. gentleman, in ver to Mr. Doyle, said that the ber of separate schemes approved for l authorities and public utility socie-was 4,372. The capital commitments respect of the schemes for which lers had been approved amounted roximately to £178,000,000. The ber of houses completed in England Wales under the housing scheme ng the last three months was 28,004. wering Mr. W. Carter, he said that ly 3,000 houses had been or were in se of being erected in the county of tingham under the assisted housing me. In reply to a further question aid that the number of houses actually pleted under the facilities provided er the Housing Acts of 1920 up to ruary 1 was 111,883. In addition, 4 other dwellings had been provided he conversion of houses into flats, or the conversion of huts and hostels. number of houses in course of erec-was 79,208.

Housing in Scotland.

r. Munro, the Secretary for Scotland, nswer to Sir D. Maclean, said that as December 31 last the Scottish Board Health had approved tenders for the tion by local authorities and public utility societies in Scotland of 21,344 houses, and 5,272 had been completed, 4,963 had been occupied, 11,849 were in course of erection, and 4,223 were not commenced. In addition, 3,167 certificates of approval of houses under the private builders' subsidy scheme had been issued, and 1,221 of those houses had been completed.

The British Empire Exhibition.

A number of questions were put by Mr. R. McNeill as to the building contract for the British Empire Exhibition. Sir P. Lloyd-Greame, Secretary of the Overseas Trade Department, said that the contract had been placed with Messrs. Sir Robert McAlpine and Sons by the Executive Council of the exhibition. He understood that it was not possible to invite tenders in such a case, because it was not possible to give specific plans on which to tender. He understood, however, that other firms were consulted, and that the Executive Council decided that the offer they accepted was a suitable one. No firm was unduly favoured.

The Geddes Report on Public Works and Buildings

In the third and last of the series of Geddes reports, which was issued last Friday, the section most interesting to architects is that dealing with public works and buildings. With respect to the Office of Works, the reporters do not recommend any reduction on the revised estimate of £538,500, which compares with the provisional estimate of £559,500, but "consider that the staff of the Department should be kept under constant review, and that substantial further reductions should be possible by the beginning of the financial year 1923–24."

As to public works and buildings, a proposed reduction on the net estimates for 1922–23 (£6,201,120) amounts to no more than £442,630, as nearly half the original provision is for works in progress.

The reporters thus summarize this section of their report:—

(1) That in view of falling prices and the need for economy, a reduction might be effected in the provision for maintenance of buildings made in these Votes.

(2) That, while no reduction in the expenditure on Rentals appears to be possible in 1922-23, the diminution and concentration of Government staffs, which should result from our recommendations, should enable a substantial economy to be effected under this head in the following year.

(3) That the provision proposed for the erection of further Inland Wireless Stations should be omitted.

(4) That resort should be had to hired accommodation wherever possible for Employment Exchanges rather than to the erection of temporary buildings.

(5) That the number of Police employed in connexion with the Houses of Parliament buildings and the Public Record Office might be reduced.

(6) That in all the circumstances, the net total of the Estimates for Public Works and Buildings under the Office of Works for 1922-23 should be reduced to £6,000,000, as compared with the Provisional Estimates of £6,643,750 and the Revised Estimates of £6,201,120.

Incorporated Clerks of Works Association

The thirty-eighth annual dinner in connection with the Incorporated Clerks of Works Association has been held in the King's Hall, Holborn Restaurant, W.C., when a company of over 400 assembled, under the presidency of Mr. Wm. Woodward, F.R.I.B.A., F.S.I.

After the loyal toasts had been patriotically honoured, Mr. G. W. Ramplin, P.P.I.C.W.A., proposed the toast of "The Architects," and said that architects, like many others, had been suffering recently through the depression of commerce. Several large contracts had been postponed owing to high prices of labour and materials, and certain by-laws were unduly restrictive.

The toast was acknowledged by Mr. A. W. S. Cross, F.R.I.B.A., who said he thought better times were in store for them all, but emphasized the necessity of combination amongst the great confraternity of constructive art.

Sir John Burnet, who also replied, said he did not concern himself with political ambition, for he had no competence for such a position. Architecture, to him, was not the construction of any one man, but the co-operation to produce beauty by innumerable men.

Mr. A. J. Dorey, P.P.I.C.W.A., submitted the toast of "The Surveyors."

Lieut.-Col. R. I. Tasker, L.C.C., responded, and paid a tribute to the value of the clerk of works, to whom he personally attributed much of the practical knowledge of his own particular profession.

Mr. R. H. Henley, P.P.I.C.W.A., proposed "The Worshipful Company of Carpenters."

Lieut.-Col. A. C. Preston, V.D. (Past Master of the Carpenters' Company) replied, and said they were doing what they could to improve the youth of the future generation.

The toast of "The Builder" was proposed by Mr. C. H. Denny, Secretary I.C.W.A., who said that when one considered the great difficulties under which any kind of building work had been carried on during the last year or two one wondered how they had been able to continue.

Mr. F. A. Minter acknowledged the toast, and said if the builder and the clerk of works worked loyally together it would be to everybody's advantage, and expecially the clients.

The Chairman proposed the toast of "The Incorporated Clerks of Works Association," and said the Association commended itself to every architect for the reason that whenever they required a capable and conscientious clerk of works they invariably went to the Association.

The toast was acknowledged by Mr. Ernest Schofield, President I.C.W.A., who said the Association existed for three things: firstly, to advance the knowledge and capabilities of the members; secondly, to provide facilities for social intercourse; and, thirdly, to circulate a journal as a means of education. They had also a benevolent fund, which required to be developed and extended.

Other toasts included "The Press," "The Visitors," proposed by Mr. F. O. Combridge, and responded to by Mr. W. Peet, and "The Chairman," submitted by Mr. H. W. Page, Vice-President, I.C.W.A., and acknowledged.

Coming Events

Thursday, March 2.

Civic Education League.—"Art in Relation to Education." By Miss Margaret E. Tatton.

Architects' and Surveyors' Assistants' Professional Union.—"Unemployment and the Professional Assistants." By Mr. C. W. Keay.

Friday, March 3.

Town Planning Institute.—"Zoning to Secure Amenities." By Mr. Barry Parker, F.R.I.B.A. "Zoning as applied to Industry and Public Services." By Mr. W. H. Gaunt, O.B.E.

Monday, March 6.

The Surveyors' Institution.—"The Analysis of Building Costs." By Mr. B. Price Davies.

Tuesday, March 7.

Liverpool Architectural Society.—"The Interior Decoration of a Liner." By Mr. H. A. Dod, M.A., A.R.I.B.A.

Wednesday, March 8.

Manchester Society of Architects.—"The Architect and the Structural Engineer." By Mr. E. Faber, B.Sc., A.M.Inst.C.E.

Industrial League and Council.—"The Personal Factor in Industry." By Miss B. Voysey, B.A.

Institute of Builders.—Dinner at King Edward VII Rooms, Hotel Victoria, Charing Cross. 6.30 p.m. for 7.

Law Report

Fire in Georgian Mansion—Liability

Waring and Gillow v. Doughty.

Feb. 20. Court of Appeal.
Before Lords Justices Bankes, Atkin, and Younger.

This was an appeal by the defendant from a judgment of Mr. Justice Sankey, sitting in the King's Bench Division. The issue raised was as to whether the plaintiffs were legally responsible for the almost total destruction by fire of a Georgian Manor House, at Ickleford, near Hitchin. The house had been purchased by Mr. Doughty, and was placed in the hands of Messrs. Waring and Gillow for reconstruction and re-decoration. The fire occurred during the course of the work, and the defendant alleged that it was caused by the negligence of plaintiff's servants or agents. In the court below Messrs. Waring and Gillow claimed £4,046 from the defendants, the amount of their account. Mr. Doughty counter-claimed for £25,000, the value of the mansion, £6,000 for work already done and expenditure incurred, and £3,000 damages for the loss of the use and occupation of the property for twelve months. Mr. Justice Sankey found that the fire broke out in the bedroom, which was being used by workmen as a plumber's shop and in which a fire was lighted in the grate, but that it was not negligent to use the room for that particular purpose. On the issue as to legal responsibility for the fire, Mr. Justice Sankey entered judgment in favour of Messrs. Waring and Gillow with costs. Mr. Doughty now appealed.

After hearing the legal arguments the Court allowed the appeal with costs there and in the Court below.

Lord Justice Bankes, in giving judgment, said that the plaintiffs were put upon inquiry as to the condition of things in the bedroom where the plumber's fire was lighted. It was said that orders were given that there should be a complete examination. The man sent to investigate found an iron bar at the top of the existing opening in the fireplace, and he took the view that there would not be an oak lintel supporting the brickwork in another room. If the plaintiffs had sent a man to investigate who knew his business, instead of being put off his guard by the presence of the iron bar he would have been quite on his guard. The man whom they deputed to make the examination made a wholly insufficient one. Had he continued his investigation he must have discovered in the chimney the timber which brought about the disastrous fire. For these reasons the judgment of Mr. Justice Sankey must be reversed and judgment entered for the defendant on the issues as to the responsibility for the fire.

Lord Justices Atkin and Younger concurred.

The President of the Society of Architects

Mr. Edwin J. Sadgrove has been co-opted by the Council of the Society of Architects as President for the remainder of the unexpired term of office rendered vacant by the resignation of Sir Charles T. Ruthen. Mr. Sadgrove this year celebrates his "coming of age" as a member of the Society, having been elected in 1901, and since 1906 he has been a member of the Council, and has held office as Honorary Treasurer, 1910; Vice-President, 1914–15; and as President, 1916–20. His services to the Society were recognized by the Council in 1920 when they awarded him the Gold Medal. Mr. Sadgrove is one of the Society's representatives on the R.I.B.A. Unification Committee, the Building Trades Parliament, the Architects' and Surveyors' Approved Society, of which he is also a Trustee, the Beaux-Arts Committee, and the R.I.B.A. Conditions of Contract Conference, etc., and his services are constantly requisitioned in connection with the Society's negotiations with Government departments, public bodies, and kindred institutions on matters of professional interest. Mr. Sadgrove is a Fellow of the Society, of the R.I.B.A., and of the Institute of Arbitrators, of which latter body he has recently been elected President. He has been in practice as an architect in London for thirty-five years, specializing in commercial buildings, and has devised and patented various appliances and materials connected with the equipment, repair, and decoration of buildings. He is a Founder, Past Master, and Treasurer of the Society of Architects Masonic Lodge No. 3244, and holds London rank, and is also a Founder and Treasurer of the R.A. Chapter attached to it.

Competitions Open

For the list of Competitions Open, readers should refer to page xx of last week's issue.

Latest List of New Inventions

Latest Patent Applications.

3911.—Clarke, W. W.—Wall, floor, ceiling structural eleme February 10.

3831.—Horne, A. B.—Paving br February 9.

3665.—Johnson, B. C.—Interchan able building blocks. Feb ary 8.

3892.—Schonfield, W.—Adjusta stays for doors, windows, February 10.

Specifications Published.

174399.—Sharp, A. P. L., and Walf F. E.—Construction of conc and like slab buildings.

174416.—Lee, J. W.—Wall and like structions and blocks theref

152996.—Dezone, L.—Metal tiles.

17445[illegible].—Melzer, A.—Method and paratus for building conc walls in situ.

174458.—Chedburn, N. S., and Chalm W. R.—Tie and apparatus securing shutters, uprig scaffolding, rails, and the to concrete walls.

Abstract Published.

173401.—Concrete building blocks. F. E. G. Badger, The Lau Carlton Lane, Derwent R Stoneycroft, Liverpool.—Fa concrete building-blocks obtained by uniting the conc base to the facing by an in mediate layer of cementit material applied before initial set of the concrete occurred. The concrete moulded into blocks with required surfaces roughened allowing solid material from previous operation to adher the corresponding faces of mould, and is then remo therefrom, and after about an hour is coated with li cement, either by stipplin with a pressure spray. A drying for 24 hours, a sec coat, preferably contai waterproofing material, is ac and, after a similar perio final coat. Alternatively, mould is only partially f with concrete, and a thick termediate layer is added pressed in with a plunger. surface is then stippled, w sufficiently hard, with a cen which may contain an oxid other colouring medium, may also be sprinkled with crushed brick or stone con ing mica. A suitable com tion for the intermediate l consists of 5 parts sand, 1 Welsh granite gravel, an parts cement.

The above particulars are specially prepare Messrs. Rayner & Co., Registered Patent Agen 5 Chancery Lane, London, from whom readers o Journal may obtain all information free relati patents, trade-marks, and designs. Messrs. Rayner will obtain printed copies of the published specific and forward on post free for the official price of 1/-

The Week's News

wn Planning in Thames Valley.

egional town-planning scheme for hames Valley is being considered.

Alnwick Rural Housing.

houses under the Alnwick R.D.C.'s e are to be built for £320 each.

New Fire Station for Bedford.

Ministry of Health have sanctioned ising by the Corporation of a loan 196 for the erection of a fire station.

Government House, Portsmouth.

ernment House, Portsmouth, is to nverted into offices for the local Headquarters of the Army.

Dublin's New City Architect.

acting city architect, Mr. A. Rirke, has been elected city architect alary ranging from £800 to £1,000.

St. Pancras Housing.

Pancras Council is to ask permission rrow £72,928 for the Brookfield ig scheme.

posed new Restaurant for London.

effort is in being made to secure a large in St. James's Square, S.W., by a of private financiers with the object verting the house into a restaurant.

School of Hygiene for London.

Minister of Health has accepted ffer of the Rockefeller Foundation ovide a sum of £400,000 towards ost of building and equipping a l of Hygiene in London.

Wall Collapse at Bolton.

rear wall, 40 ft. high, of a new a which is being built in St. George's , Bolton, collapsed recently. A man illed by falling bricks. The collapse it is stated, due to the sudden thaw.

Building Strike in Spring?

National Federation of Building Operatives are balloting their bers on the question of a levy in the of a national strike or lockout in uilding trade in the spring.

Factory on an Open Space.

proposal that 37½ acres of Hackney hes, the property of the London ty Council, should be sold to the rnment for use as a factory has ed considerable discussion in Hack- nd Leyton.

Torquay Building Developments.

rbay Hall Estate, formerly the rty of Sir Canning Wills, a tobacco ate, is to be opened up for building oses. The estate is situated on the rn side of Torquay, and provides ificent views of the sea and coast.

Bristol Architecture.

C. F. W. Dening, F.R.I.B.A., lec- g on "The Later Renaissance Archi- re of Bristol," at Portishead, gave utline of the evolution of the styles eventually culminated in the classic al. Mr. Dening showed some inter- g lantern slides of woodwork and ork of the period.

A.A. New Grand Medal.

The Société des Architectes Diplômés par le Gouvernement have decided to place at the disposition of the Council of the Architectural Association a grand medal to be presented to the best student (man or woman) who has received the Diploma of the A.A. School.

King George's Sanatorium for Sailors.

King George's Sanatorium for Sailors, on behalf of which a special appeal for funds was issued by Lord Inchcape some time ago, has, according to information supplied by the secretary to the Imperial Merchant Service Guild, obtained subscriptions totalling £104,000.

Baths Will Cost Less.

The Board of Trade Committee presided over by Sir William Acworth has decided that the National Light Castings Association had not made out its claim to have baths regarded as a key industry, to be protected by a 33⅓ tax on imported baths.

Bathing Chalets for Brighton.

Brighton Corporation propose to abolish the bathing machines and erect dainty chalets built on Continental lines. On some parts of the beach it is also intended to build four-compartment bathing shelters. It is hoped to provide ninety-nine chalets as soon as possible.

New London Store.

Messrs. Harrods, Ltd., propose to build a big new store on the Piccadilly Circus island site, which is bounded on its other sides by Piccadilly, Air Street, and Regent Street. Features of the new building will be a luxurious café and a dancing saloon. The entire enterprise is estimated to cost £2,000,000. We understand that Mr. J. J. Joass, F.R.I.B.A., is the architect.

The R.A.F. Memorial.

Work has been commenced in the contractor's yard on the stonework of the Royal Air Force Memorial, which is to be erected on the Thames Embankment, from the designs of Sir Reginald Blomfield, R.A. Mr. Reid Dick is actively engaged on the modelling of the bronze eagle and globe.

The British Empire Exhibition.

The Executive Council of the British Empire Exhibition have decided to postpone the opening of the exhibition from April, 1923, to April, 1924. This course has been rendered necessary on account of the wide scope of the project and the difficulty of preparing and assembling so large a collection of exhibits in the time originally contemplated.

York City War Memorial.

The city is still looking for a suitable site upon which to place its war memorial. The site first suggested was one near that for the North Eastern Railway memorial, which will consist of a tall obelisk, and will cost £20,000. About £2,000 is to be spent upon the memorial for the city. After it was discovered that the city memorial would be overshadowed by the N.E.R. memorial, other sites have been suggested. Sir Edwin Lutyens is the architect for both memorials.

Cinema Crash Sequel.

As a result of the inquiries into the disaster at the Knickerbocker Cinema, the Board of Commissioners and the other authorities concerned have ordered the closing of seven theatres there, declaring them to be unsafe. The theatres affected include two of the principal houses in Washington. All are to be specially examined by competent surveyors.

Concrete Institute Conference at Olympia.

By the courtesy of Mr. H. Greville Montgomery the Council of the Concrete Institute has arranged an important series of discussions at the Building Exhibition, to be held at Olympia in April, on "Topics of the Moment." Members of the Institute are specially asked to keep free the dates Tuesday, April 18, to Friday, April 21, inclusive.

Eighteenth-Century Furniture.

An interesting lecture on "Eighteenth-Century Furniture" has been given before the Plymouth branch of the Devon and Cornwall Architectural Society by Mr. J. Leighton Fouracre. In the course of his lecture Mr. Fouracre explained in detail the work of Chippendale, Heppelwhite, and Sheraton. Mr. A. G. Bewes presided.

Central Heating and Housing.

Mr. Thomas White, Dundee, lecturing on "Central Heating and Housing," before the Royal Technical College Architectural Craftsmen's Society, described the Logie housing scheme, Dundee, of 250 houses. He specially referred to the Hospital Park and Stirling Park combined schemes, Dundee, and the ideal cooking and heating independent system for private houses.

Electric Lighting at Jersey.

The island of Jersey, almost notorious as being one of the last places to adopt electric lighting, is in the near future to lose this reputation. Two schemes are now before the public. One from Messrs. Hunter, of Glasgow, is to light the whole island; whilst the municipality of St. Helier have a scheme drawn up by Mr. Arthur Ellis for the lighting of the town, the latter costing £120,000 when fully developed.

London Super-Kinema Scheme.

It is expected that negotiations will shortly be completed for the sale of the site and buildings previously occupied by Messrs. Crosse and Blackwell in Charing Cross Road, W.C. The prospective buyers are a kinema syndicate, and the purchase price for the site and buildings is said to be in the neighbourhood of £325,000. Should negotiations be completed there will be built a new superkinema, capable of holding 4,000 people.

Monument to Duke of Norfolk.

In the Fitzalan Chapel, at Arundel Castle, a monument has been unveiled to the memory of Henry Fitzalan Howard, the fifteenth Duke of Norfolk. The monument, which is by Sir Bertram Mackennal, A.R.A., shows a figure of the late Duke in a recumbent position in his robes as Hereditary Earl Marshal of England. The figure, in green bronze,

rests upon a base of Sussex marble, on the sides of which are heraldic devices in brightly coloured enamels.

Society of Architects' Membership Examination.

The next examination to qualify for candidature for membership of the Society of Architects will be held in October next in London and other centres. Entries close on September 1. Candidates who take the whole examination are eligible to compete for awards of the total value of £180. The examination fee for Licentiates and Students of the Society is £2 2s., and for other candidates £4 4s. A syllabus and entry form may be obtained from the Secretary at 28 Bedford Square, W.C.1.

Sir John Soane's Museum.

To-day, Wednesday, Sir John Soane's Museum, 13 Lincoln's Inn Fields, W.C.2, will be re-opened to the public. This interesting house, which was built in 1812, is now devoted to a delightful museum of painting, sculpture, and antiquities. From March until August the Museum will be open free of charge on Tuesdays, Wednesdays, Thursdays, and Fridays, between 10.30 a.m. and 5 p.m.; at other times a visit may be paid to the museum on presentation of a card, which may be obtained from the curator, Mr. Arthur T. Bolton, F.S.A., F.R.I.B.A.

Friends' Meeting House.

Devonshire House, in Bishopsgate, the headquarters in London of the Society of Friends, is to be sold. The Friends are to secure more commodious premises elsewhere. Devonshire House was built about 1570 by Jasper Fisher, a Freeman of the Goldsmiths' Company, a justice of the peace, and one of the six clerks in Chancery. With what is known to-day as Devonshire House are incorporated the Dolphin Inn, built about 1793, and other properties in Cavendish Court, Devonshire Street, and in Bishopsgate and Houndsditch.

Government Huts for Guernsey.

About twenty huts, formerly occupied by the Ministry of Pensions, that stood in the Victoria Gardens, were bought some weeks ago by Mr. J. A. F. Ozanne, president of the State Homes Workers' Committee, and are now being erected in the Channel Islands. The cost per hut, counting purchase, dismantling, transport to London Docks, and shipping to Guernsey, has worked out at £72. The committee intends to use two of them as additional wards for the local sanatorium, and to house about thirty families in the remainder at a rent of from 5s. to 7s. 6d. a week.

Cotman Exhibition.

The trustees of the National Gallery, Millbank, are arranging to hold an exhibition of the works of John Sell Cotman for three months commencing early in April. The exhibition will consist of works by J. S. Cotman, in oil, water-colour, and black and white, and a few works by his sons, John Joseph Cotman and Miles Edmund Cotman, Thirtle, and related painters of the Cotman branch of the Norwich School will be included for comparative study. The loan of a large number of Cotman's most important works has already been promised by public galleries such as Norwich, Edinburgh, Manchester, and Cardiff, and by Mr. Russell J. Colman, Sir Hickman Bacon, Mr. J. P. Heseltine, Mr. R. H. Benson, Mr. Arthur Samuel, M.P., Mr. Lewis Fry, and Mr. Derwent Wood amongst private collectors, but it has not been possible in all cases to trace works known to have existed, and the trustees would welcome any information and the offer of loans of any authentic works by J. S. Cotman, which should be sent to the Director, National Gallery, Millbank, S.W.1.

"Architects' Olympian Night."

By the invitation and assistance of Mr. H. Greville Montgomery, the Architectural Association is organizing a great fancy dress ball and carnival in the Conference Hall at Olympia on April 21. There will be a carnival procession illustrating "Brighter Building Stunts," which will parade the Building Exhibition at 9 p.m., previous to the ball which will continue to 5 a.m. All proceeds will be devoted to the A.A. Endowment Fund. Early application should be made for tickets, which will be limited in number, to the Secretary, Architectural Association, 34 Bedford Square, W.C.1. Single tickets (including refreshments), £1 1s.; double tickets to admit gentleman with lady (not two gentlemen), £1 15s.

Princess Mary's Town and Country Homes.

Princess Mary's town house, in South Audley Street, faces the Stanhope Gate, Hyde Park, and is known as Chesterfield House, having been designed for Lord Chesterfield by Isaac Ware. Inside there is a remarkably fine marble staircase. Harewood House, which is to be Princess Mary's Yorkshire home, is set in the midst of a noble park, with gardens laid out by "Capability" Brown at a cost of more than £16,000. Carr of York and Robert Adam were the architects of the mansion, in which the Corinthian order is adopted. The mansion cost £130,000, and took twelve years to build. Fine painted ceilings, from the hands of Zucchi, Angelica Kauffmann, and others, are a notable feature of the interior, which, needless to say, is sumptuously furnished, Chippendale being largely represented there.

British Industries Fair.

The railway companies have arranged to run special excursions at greatly reduced fares for the benefit of the trade buyers visiting the London and Birmingham sections at the British Industries Fair. The fare will in most cases be approximately the price of a single ticket for the double journey, where passengers making use of the special excursions return on the same day. For passengers who desire to make a stay of from two to six days the cost of a return ticket will be about one-third more than the usual single fare.

The Fair, which is organized each year by the Department of Overseas Trade, is one of the most important trade fairs in existence, and, in addition to representing practically every British industry, has the merit of being self-supporting. Only trade buyers are admitted to the fair, the general public being, at the special desire of the exhibitors, rigorously excluded. The fair, which is now being held concurrently at the White City, London, and Castle Bromwich Aerodrome, Birmingham, closes on March 10 next.

"Westminster Abbey."

Sir Banister Fletcher, F.R.I.B.A livered an illustrated lecture on Architecture of Westminster Abbe the Central School of Arts and Southampton Row, W.C., last W day.

Professional Prospects Overseas

From information received from is regarded as reliable sources the S of Architects think it desirable to members who may be contemp emigration that the professional ployment problem is no less acute Union of South Africa and in Zealand than it is at home. Furthe cost of living is very high, and th the cost of transport from the Coast to consider if an inland centre objective. No architect should p overseas with a view of establish practice or obtaining employment he has sufficient capital to mak independent of work for a consid period, nor should he enter into a tract at home for employment ov without being sure that he is dealing a person who is competent to bi principal or department, and tha salary is at least sufficient to pro living wage. The Secretary o Society will be glad to give what f information he can to any member may be interested.

Ideal Home Exhibiti

"The Daily Mail" Ideal Home E tion will be opened at 3.30 p.m. t by Princess, Countess of Athlon Olympia. After the opening da exhibition will be open daily from 1 to 10 p.m. until March 25. Sectio devoted to furnishing, decoration, s tion, ventilation, heating, lighting to labour-saving devices, etc. On F the twenty-third annual meeting Garden Cities and Town Planning As tion is to be held in the Conference under the presidency of Mr. Cecil H worth, M.P., Under Secretary of Sta Foreign Affairs. The Associatio also holding a number of confe during the exhibition. Applicatio tickets to the meeting and the confe should be made as early as possible Secretary, Garden Cities and Planning Association, 3 Gray's Inn W.C.1.

The Winget Stand.

On the "Winget" stand, No. 65, floor, at the Ideal Home Exhib demonstrations are being given o firm's concrete block constructio means of which some striking house now being built in the Welwyn G City, Herts. No two blocks are ex alike in colour or texture. There working examples of various co block-, brick-, and tile-making mac including the No. 3 "Winget" pre machine, which is built of steel. O stand are also crushers, crushing and the standard chain spade ma for semi-wet mixing. The crushing are claimed to be capable of red 6 to 7 cub. yds. of clinker to ¼ in. under per hour. Another ingeniou hibit is the "Dekko" portable conv which is claimed to be capable of lo or unloading a ten-ton truck or s wagon, with the assistance of two m twenty minutes.

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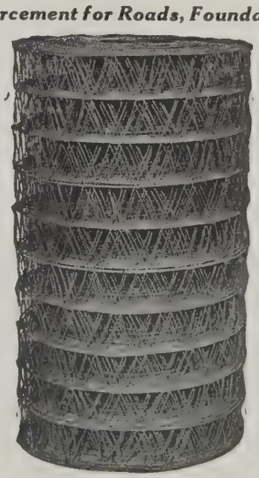

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Electrical Notes

Duke of York at Osram Lamp Works.

The Duke of York, who is specially interested in welfare work, recently paid a visit to the Osram-G.E.C. Lamp Works of the General Electric Co., Ltd., at Brook Green, Hammersmith. His Royal Highness was received by Mr. C. Wilson, the director in charge, who was accompanied by other members of the Board and officials of the company.

The Duke of York, during a tour of the works displayed keen interest in the workpeople, the majority of whom are girls. Of the total of 2,100 employees, only about 600 are males. The Royal visitor saw all the principal processes connected with the manufacture of Osram electric lamps, from the making of the filament from schœlite to that in which he inspected the finished article. Throughout his tour the Duke chatted freely with the workpeople, and asked them about their length of service, their hours, and their general conditions of employment.

His Royal Highness learned with evident satisfaction that wherever possible disabled ex-Service men were employed in the works, and that invalid carriages were provided for them. In this connection it was stated that over 1,700 of the workpeople employed by the G.E.C. and allied firms volunteered for war service before there was any talk of conscription. Of these 252 had made the great sacrifice, 281 were wounded, a large number gained commissions, and ninety-one won special distinction. The Duke's attention was called to two volumes prepared by the firm. One of these was a Roll of Honour giving the names, short histories, and the photographs of the men who fell, while the other was a record of the various war activities of the General Electric Company, Ltd.

His Royal Highness also visited the Red Cross Department, the dining rooms, and various other departments connected with the welfare of the workers. He remarked upon the happy, healthy appearance of the workgirls, and expressed satisfaction at finding that in all departments of manufacture, the ventilation and the general conditions were of the healthiest character that it was possible to ensure by special ventilation and general care. One of the first remarks passed by the Royal visitor to Mr. C. Wilson upon arrival was: "Your lamp is the one advertised with the elephant, is it not?"

———

An Electrical Luncheon.

The annual luncheon of the British Electrical Development Association took place at the Hotel Cecil last Wednesday, and a large and enthusiastic gathering of live wires proved once again that the cause of electrical advancement does not lack vigorous champions. Mr. Hugo Hurst, the retiring president was unfortunately prevented by illness from being present, and the chair was taken by his successor, Mr. E. C. Ransome, O.B.E., J.P.

Proposing the toast of "Electrical P gress," Mr. Atkinson read a letter from Hurst, regretting his absence and expre ing his appreciation of the good work the E.D.A. They recognized, said Atkinson, the necessity for a campa of publicity, for it was essential to e cate the public in the uses of electric Consumption was going up in leaps bounds; the increased price of coal brought in many users of power, a domestic difficulties had made for increase of electricity in the home. Th were, however, still suffering from effects of the war. There was gene reluctance to enter on any expenditu and the industry was handicapped uncertainty regarding the future. Th were rumours of drastic electrical legis tion in the air, and until these were sett it was impossible to make any move.

Mr. Arthur Neal, M.P., Parliament Secretary of the Ministry of Transport reply, said that the object of the El tricity Commission was identical w that of the E.D.A., and that the Gove ment would do all that was possible remove obstacles and make clear the p of progress. Bureaucracy was wanted, but it was their aim to rest comfort to the homes of the worke The Ministry of Transport wanted assist the industry, and all suggesti would be welcomed. Mr. Neal also ferred to the proposed electrification the railways, and said that it wo mean valuable and much-needed wo for the electrical industry.

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Wednesday, March 8, 1922. Vol. LV. No. 1418

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

CHAPELLE EXPIATOIRE, PARIS.
PERCIER AND FONTAINE, ARCHITECTS.

27-29 Tothill Street, Westminster, S.W.1.

Current Architecture. 150.—The Scala Theatre, Birkenhead: Detail of Panels in Café

Designed and Painted by Arnold Auerbach and James S. Bramwell

These colour panels are framed in vermilion lacquer against a background of rich black, through which runs an undulating gold line. The cornice and the rails of frieze and dado are decorated in vermilion, white, and blue enamel. (See Article in this issue.)

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

Wednesday, March 8, 1922 Volume LV. No. 1418

What is Wrong with the British Prix de Rome?

EVERYBODY is asking this question, and Mr. Robert Atkinson, Professor Beresford Pite, and Professor A. E. Richardson have answered it. Mr. Atkinson had already done so, in a manner, quite unintentionally, in the very first paragraph his luminous report on architectural education in the ited States. He has answered it statedly and explicitly, wever, in a letter which we have much pleasure in print- in our correspondence columns this week.

irst as to the paragraph in his Report—a splendid tribution to the discussion of architectural education, the way. Mr. Atkinson puts in the forefront this very nificant observation: "After visiting the States," he s, "the broad impression left on the mind is that the tress Art *lives* in America, as it lives in France, and in other country in the world."

When he wrote this decidedly modest paragraph, Mr. inson was possibly unaware of the striking results of British Prix de Rome preliminary competition. Other- e he might have been tempted to modify his rather eping statement, for it would almost seem that though Mistress Art *lives* in America and in France, she surely cts a *loge* in Liverpool. Else it were somewhat difficult account for the phenomenal successes of students from erpool in Prix de Rome and similar competitions.

or observe: eight out of the nine candidates selected ake part in the final competition for the British Rome ze came from Liverpool, and the ninth hails from Man- ster. Prodigious! Where are the other schools, and ecially where is London? And what does it all mean? iverpool University School of Architecture did bril- tly. Not for worlds would we dim by a single breath glory of their very fine performance. Nevertheless, is not perfectly certain that the glory would have been atly enhanced if the competition had been more strenu- and the candidates more fully representative of other ools?

Why was the competition comparatively languid? erywhere among architects the question is being asked, we have, therefore, endeavoured to discover the true sons underlying the defection. About the results of efforts to fathom the mystery there is nothing sinister sensational. It seems to be largely a case of dis- sfaction with the conditions.

he Rome Prize should be esteemed by the architectural ools as the blue riband of the year. Its winner enjoys priceless privilege of three golden years of study among glories of ancient Rome; enjoys, too, the lasting *kudos* t clings to a Prix de Rome man. Yet, in spite of the ndour of the guerdon, London students have fought of the contest. The answers that we have succeeded eliciting from authoritative sources will be found ly instructive. They go to the root of the ter. The less authentic explanations that have been died about very freely may be set aside. London students, it has been said by the gossips, cannot find time to enter for the examinations, and this happens to be partly true, as Mr. Atkinson's letter bears witness. Again, young men have been heard to protest that they "cannot afford to waste" three years in Italy at a time of life when they would be more profitably employed, they say, in working up practices. This is surely a narrow view. Further, they complain that the amount of the prize-money is insufficient to cover the expenses of a prolonged sojourn in Italy. This is a matter for the individual. In short, say they, "the British Prix de Rome is not worth going in for." This last gem of thought will surely provoke Liverpool men to one of their celebrated outbursts of song: "The fox he said, 'Those grapes are sour.'" Liverpool students, at all events, do not hesitate to "go in and win." Perhaps they have more private wealth or less expensive habits than the student-architects of London.

Most of those explanations or excuses merely aggravate the case. If these were the only reasons for standing down, it would seem not improper to appeal to the chivalry of the abstainers. By standing aloof from the competition they would run the risk of detracting cruelly from the value of the victory. Their action—inaction, rather—would directly tend to reduce what should be regarded as a national prize to the inferior status of a local prize—as if it were no more than merely a reward for the "best student of the year" of some particular school.

Such a result would be grossly unfair to Liverpool, for instance: to whose students and professors we desire to render the fullest possible credit for the brilliant successes for which the Liverpool University School of Architecture has become famous.

But we are equally anxious both that the British Rome Prize scheme shall not be allowed to perish of inanition, and that the glory of its prizemen (from whatever school) shall never be tarnished by such unfair allegations as that if the competition had been keener the results might have been different—a mean and pusillanimous observation in any case.

Yet we must not close our eyes to the fact that it is certainly the wish and intention of the promoters and administrators of the scheme that the prizes shall be eagerly sought by students from all the architectural schools in the kingdom, and that from the stimulus arising from keen competition there would in due time arise a higher standard of accomplishment in all the schools all over the kingdom. It would be pitiful to see those hopes disappointed, that fine conception frustrated, for want of a little enthusiasm.

It may possibly be contended that, after all, the British Prix de Rome is but one small item in the programme of architectural education—if there is a programme. We should not call it a small item, but a very important one, and we should be sorry indeed to suppose that any of the architectural schools are underestimating its value, not

only to themselves personally, but more especially to architectural education.

We feel that the British Prix de Rome should be regarded as a rallying-point, an oriflamme to guide and stimulate endeavour in the architect in training. Will not the heads of the architectural schools confer and co-operate in support of so obvious an advantage to their educational equipment? Indeed, they are already conferring, in a manner. Our columns have been thrown open to them, and we hope to see the whole matter thoroughly discussed there.

As the matter stands, the apathy towards the Prix de Rome competition seems rather to confirm Mr. Atkinson's impression that the Mistress Art does not *live* in this country, always excepting her *pied-à-terre* at Liverpool. One important result of the discussion we have initiated should be to offer her the unstinted hospitality of London.

Mr. Robert Atkinson advances very cogent reasons for the London abstentions, and he makes an important suggestion for their future avoidance. Professor Beresford Pite, of the Royal College of Art, unlike Mr. Atkinson, does not think that the competition would interfere with the normal work of the school, but he offers certain criticisms on the character of the competition. We are glad to have elicited such weighty opinions on so important a subject.

Is Westminster Bridge Safe?

Old and persistent rumours of the instability of Westminster Bridge have been revived. A question on the subject by Sir F. Hall in the House of Commons on February 27 did not receive a very satisfactory reply. For aught that is positively known to the contrary the bridge is quite all right; but Mr. A. Neal, who answered the question, should have fortified himself with clear evidence on the point. In such an important matter as the safety of a great metropolitan bridge, it is insufficient to say: "The bridge is under constant examination by engineers of the London County Council, which is the authority responsible for its maintenance. So far as I am aware," he added, "no structural weaknesses of any kind have been revealed." Asked further whether careful inspection had been made by experts "since this enormous traffic had been brought over the bridge," Mr. Neal tamely replied: "That is a matter entirely for the London County Council." Sir F. Hall, very rightly, would not admit that it was, but when he asked, "Will the hon. gentleman communicate with the Highways Committee of the County Council on this important subject?" he could get nothing more satisfactory than the perfunctory promise, "I will send them a copy of the question and the reply." What is behind Sir F. Hall's questions? Has he any real reason to suppose that the bridge is unsafe? The mere fact of a question on the subject having been asked in the House of Commons is sufficient to awaken a degree of public alarm that it is worth while to allay with an authoritative pronouncement.

Is the Substructure Sound?

Doubts as to the soundness of the substructure have possibly arisen in the mind of someone who has read certain published descriptions of it—such, for instance, as that given by John Timbs in his "Curiosities of London." The Westminster Bridge works, he records, were begun in the middle of 1859. "No coffer-dams were used; but on the site of each pier, elm piles were driven deep below the bed of the river into the London clay. Round these again were forced massive iron circular piles, grooved at the edges, so as to admit of great sheets of cast-iron being slid down like shutters between them; the space they shut in being carefully dredged out of mud to the bed of the river, the piles tied together with iron rods, and the space filled in between with concrete up to low-water mark, when the masonry—enormous slabs of granite, weighing from eight to twelve tons each—was fixed for the pier, and on these were raised the massive stone piers themselves. The arches of the bridge are seven in number, each formed of seven ribs, which are of cast-iron nearly up to the crown, where, to avoid danger from the concussion of heavy loads, t are of wrought metal." It all seems rather compos patchy, and empirical, and the above-quoted deta description seems rather to justify the suspicion t apparently Sir F. Hall has in mind that this medley of and cast-iron piles, of sliding shutters and iron rods, granite and concrete, of cast-iron and "wrought met whatever that may mean, may chance to have "c unstuck" in the course of sixty years and more of endura of time and tide, and of the ever-increasing weights that bridge has had to bear—weights that have vastly increa both in volume and in frequency since motor traction introduced.

Railless Trolly Tramways

Lewisham Borough Council have—wisely, we thin decided to oppose the L.C.C. project of constructing tr tramways through portions of their not wholly unbeaut borough. It is argued by the borough councillors that local roads are not suitable for this type of service, gradients on some of them being very steep, while som the roads are too narrow. Moreover, residents have tested against the disfigurement of roads by overhead w and posts. What was formerly a very pleasant thorou fare in "Leafy Lee"—the Eltham Road—has had its charming appearance ruined by the introduction of overhead system of traction, and to this outrage on amenities the Lewisham Council can confidently appea justification of their refusal to support the new sche Disfigurement of the roads by posts and wires destroys incentive to "design in beauty" the houses that m shortly occupy the vacant lands still to be seen along s of the highways within the borough of Lewisham.

Quicksands in a London Roadway

Speaking of the roads of Lewisham recalls an embarra ing peculiarity that some of them have. Take the H Road, Lee, for example. It is constantly in an unheal state owing to its naturally unsound constitution. A feet below the surface there are quicksands, which, i said, show a constant effort "to join the brimming riv for which they would appear to have a passionate s affinity. In their hurry to reach the Thames, they w draw their support from the concrete above them, when this crust is loaded to breaking-point, away g omnibus or market-wain, or what not, into the capaci hollow left by the inconstant sand. A week or so ago this same road, there were two separate bursts of wa mains, with enormous consequent damage to the roadw from which traffic has had to be diverted. It would s that the treacherous sand had withdrawn its support f the main, which consequently collapsed. It was on acco of this running sand, it is said, that Sir George Gilbert S was forced to abandon his design for giving the church St. Stephen, in the High Street of Lewisham, a noble to and steeple. St. Stephen's has an unfinished tower, wh it is said, could not be safely completed on this founda of shifting sand.

Announcing Competition Awards

Competitions should soon come along apace. A s time ago, several correspondents asked us to make pu a grievance they had against assessors. They complai that these gentlemen were in too much of a hurry to home when the competition was finished. They sho have stayed, it was argued, to see that the news of de was broken gently to the fallen. It would be better, correspondents argue, to give the names of the win rather than to send each of the losers nothing more tha curt intimation of his defeat. No doubt clerical wor this kind is delegated by the assessor, who in most c would think it quite unnecessary to dictate the pre words in which the dismal tidings of defeat should be veyed. We trust that assessors will take this hint, instruct the clerk that the polite way is to announce winners, and leave the losers to infer their own sad fate

London Schools and the Rome Prize

The Conditions Criticised

In this year's competition for the Rome Prize, eight out of the nine selected competitors were students of Liverpool University, London school being represented even in the preliminary round of the competition. With a view, therefore, to discovering causes of this unfortunate state of affairs, the Editors wrote to the principals of the London architectural schools asking: whether students from the respective schools had entered for the competition; (2) whether, if they had not entered, they had sons for refraining. Up to the time of going to press answers have been received from Mr. Robert Atkinson, Professor resford Pite, and Professor A. E. Richardson. These are given below, and it is possible that they will create a good deal of prise.

The Architectural Association

34 and 35 Bedford Square,
London,
W.C.1.
March 2, 1922.

To the Editors of THE ARCHITECTS' JOURNAL.

IRS,—A reply to your enquiry as to the reason for the ire of the English Rome Prize to attract competitors n London schools involves rather a complicated state-it, which would be too long for my present letter.

s you know there has been very considerable dissatis-ion with the conditions of the competition, and still e with the conditions under which the assessing of this petition has been carried out, but I do not think either hese have very materially influenced the extraordinary lt of this year's competition, in which only one London lent, who was from the Association, competed, against or twelve from the provinces. We at the Association e unable to persuade any number of our students to pete for the very simple reason that our course is very nuous, and that every student, to do in his spare time enormous amount of work required by the assessors, ld have an almost superhuman task. By the school ulations, failure to receive fifty per cent. marks for each le subject, means that the student must remain for a her year in that section, and as the work required for competition occupies at least twelve weeks, you will see this disqualifies any student competing from an entire r's work.

n my opinion the amount of work required for the pre-nary competition should be considerably reduced, and times at which these competitions are held should be nged to fall within the vacation period of the schools. ther, I think that more representation on the jury ld be given to schools, so that those people who are ly in touch with education might be given some say in organization of students' competitions.

Yours faithfully,
ROBERT ATKINSON,
Director of Education.

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chool of Architecture, South Kensington

Royal College of Art,
South Kensington,
London, S.W.7.
March 3, 1922.

To the Editors of THE ARCHITECTS' JOURNAL.

IRS,—In answer to your letter as to the Prix de Rome. d not arrange for any of the students of this college to pete this year owing to the effect of last year's award. ally remarkable and original design was then submitted had been admirably worked out, but as it was not judged worthy of consideration, and as the successful designs in my judgment were not of a class useful to students, I did not feel willing to induce disappointment again.

The method of draughtsmanship and the limited type of design that seem necessary to success in this prize are to my mind handicaps to breadth of view and thoroughness in work. The competition therefore has not a good influence on the study of architecture. At present I regard it as unhealthy.

I much regret the resignation of Professor Lethaby from the faculty.

My suggestion for the improvement of the competition would be to require and permit only working drawings prepared for practical purposes—plus perspectives. The constructional problems should be worked out and not evaded.

I do not think that the interference with the normal work of the school concerned is of importance—as advanced students only would compete.

Yours faithfully,
BERESFORD PITE.

London University School of Architecture

University College,
Gower Street,
W.C.
March 3, 1922.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—London University School of Architecture has been thoroughly reorganized during the last two and a half years. The curriculum has been changed to include the teaching not only of architecture, but of subjects associated with architecture.

The policy of the school has been in the direction of training the students to fit them for the requirements of modern practice. It has been felt to be of greater importance to equip students with all-round knowledge of the subject rather than to encourage competition for prizes such as the Prix de Rome, which should be reserved for men who have passed the Final Examination of the R.I.B.A. and have also mastered the preliminaries of their architectural education.

It has been thought better to concentrate upon a system likely to raise the general standard among students rather than to advertise the school by competing for prizes which are beyond the reach of third-year students. It is, however, the intention of the Architectural Department of University College to encourage the Degree and Diploma students to compete for the Prix de Rome in due course.

Yours faithfully,
A. E. RICHARDSON.

[The attention of readers is also directed to the leading article on page 359, wherein the whole subject of the Rome Prize is generally reviewed.—Eds. A. J.

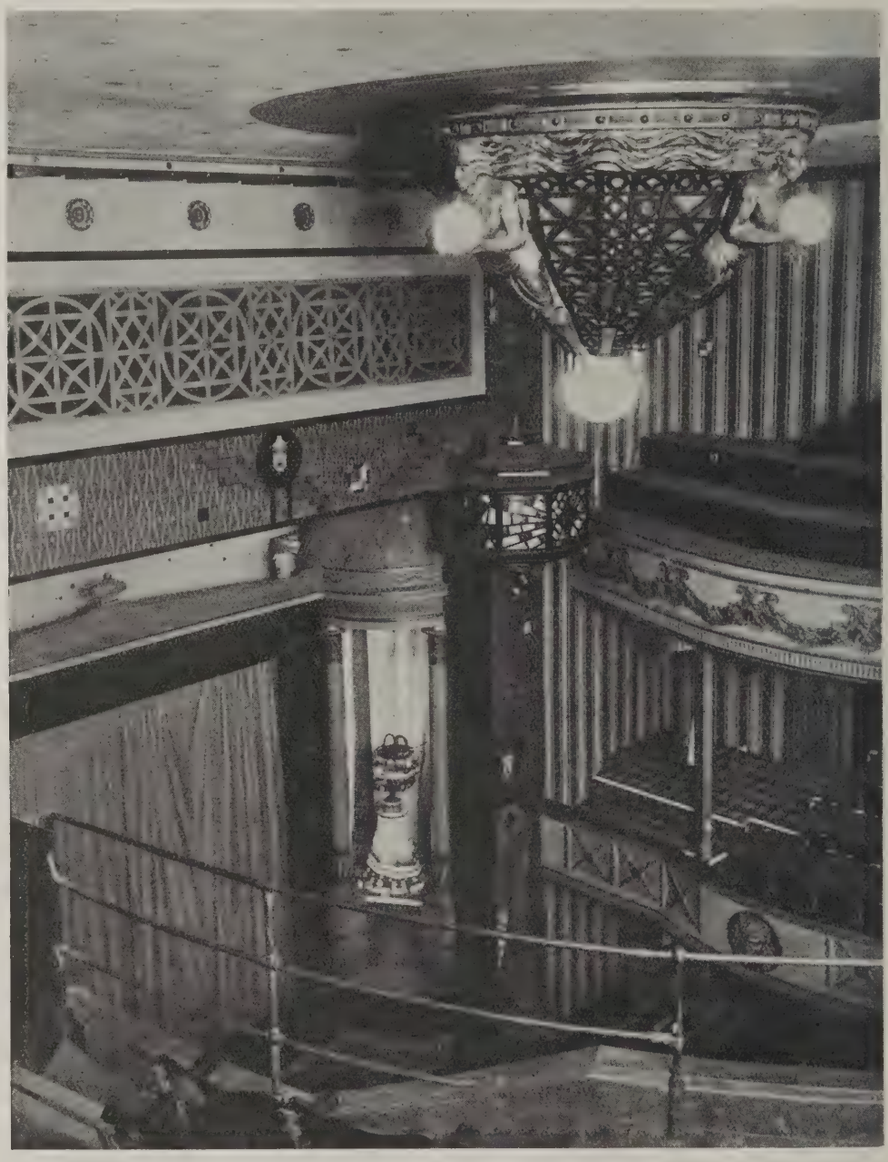
Colour Decorations in a Cinema

A COURAGEOUS experiment in colour-decoration has lately been carried out at the Scala Theatre, Birkenhead, by Messrs. James S. Bramwell, A.R.I.B.A. (of the firm of Joseph Pearce, M.S.A., and James S. Bramwell, of Liverpool), and Arnold Auerbach, in collaboration.

Extensive colour-schemes for theatres are, of course, no new thing. Few theatres have been completed within modern times without some attempt at decorative colour treatment. The general style of such work has, however, become stereotyped to a degree. Walls, if painted at all, have realistic panels, mostly depicting the terpsichorean revels of woodland nymphs; while, on the ceiling, gods, goddesses, and cherubs, all blowing upon trumpets, disport themselves on the backs of billowy clouds.

Nor are these doubtful delights spread about with any unduly lavish hand. Mostly the wall panels go no farther than the back row of the stalls, while the aerial antics of gods, goddesses, etc., conform strictly to the range vision of the occupants of the more expensive seats. and gallery have to be content with a dowdy distem and an imperfectly whitewashed ceiling.

Messrs. Bramwell and Auerbach would have nothing do with this bad, piecemeal tradition. They have desig a comprehensive decorative scheme on very original line a blending of archaic Greek formalism with an element t may perhaps be described (with all respect) as decora

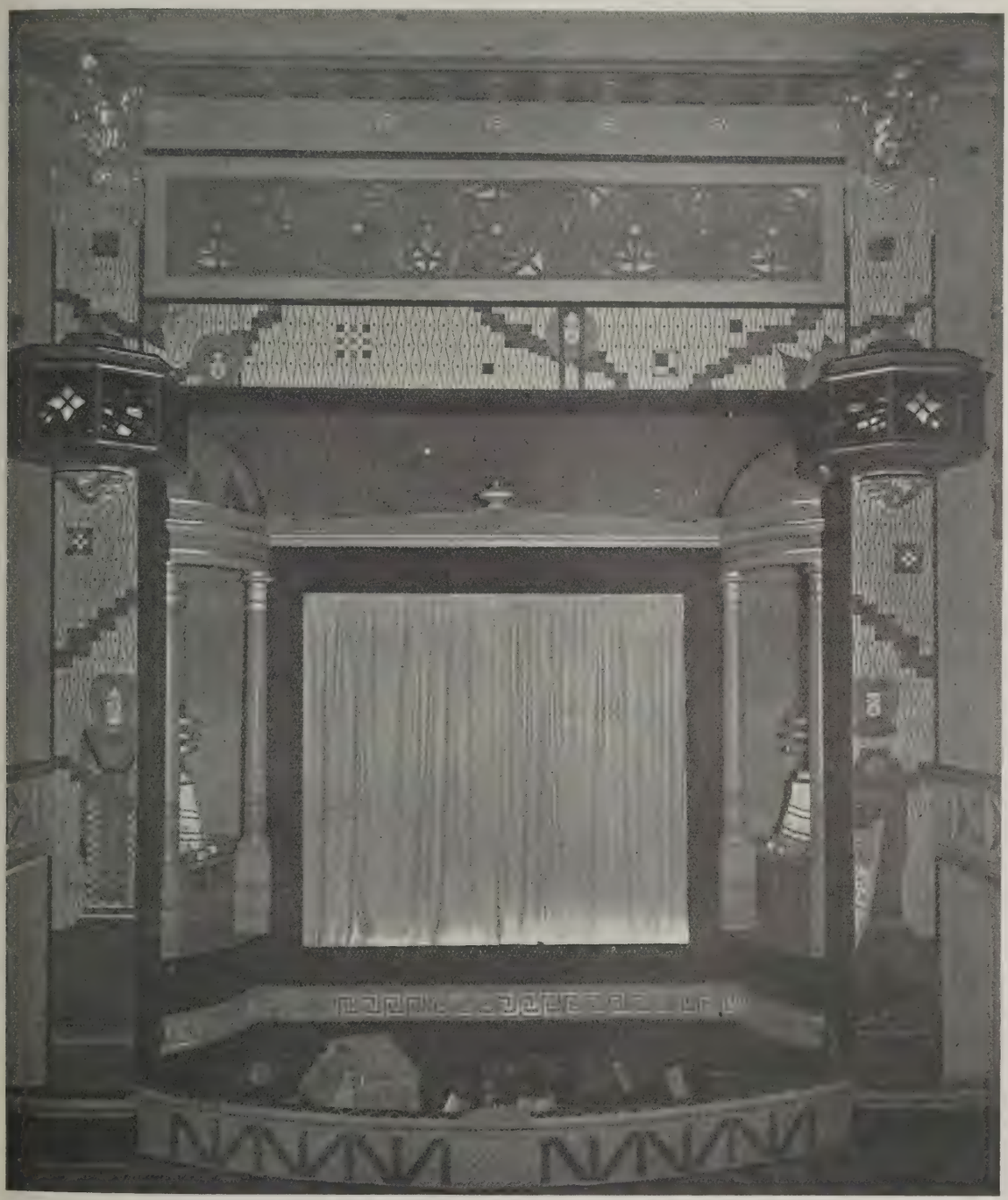


THE SCALA THEATRE, BIRKENHEAD: VIEW OF AUDITORIUM FROM TOP BALCONY.
JAMES S. BRAMWELL, A.R.I.B.A., ARCHITECT. ARNOLD AUERBACH AND THE ARCHITECT, ARTISTS.

jazz. And a very amusing thing they have made of it. is impossible to avoid being captivated by this colou ensemble—its variegated "chevron and balloon" friezes extraordinarily decorative stripe motifs, its panels archaic figures, its severely angular furniture. The a torium itself is a masterly example of purposeful ec tricity. Before coming to a detailed description of decorative scheme, however, we may first give s account of the building itself.

Current Architecture. 151.—The Scala Theatre, Birkenhead: Proscenium Front

James S. Bramwell, A.R.I.B.A., Architect. Arnold Auerbach and the Architect, Artists



The predominating colour of the auditorium is orange, with lines of delicate mauve superimposed, while the main structure of the proscenium setting is of varying soft greys, picked out with black and gold. Figures and check designs on the proscenium front and walls are in brilliantly coloured enamels. The grille below the frieze and the key pattern above the orchestra show ruby lighting.

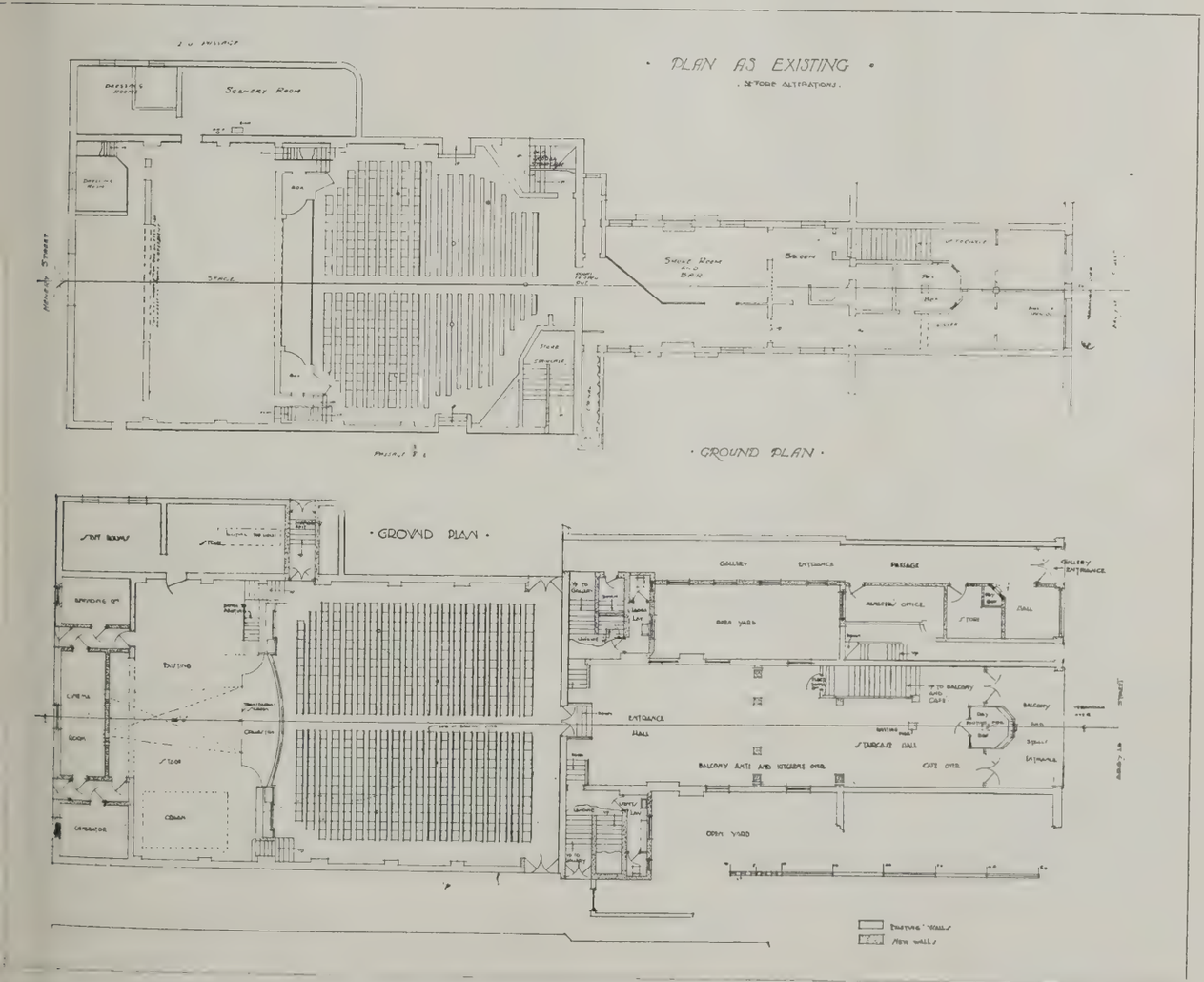
ENTRANCE AND PAY-BOX.

The "Scala" was an old-fashioned provincial theatre, having two balconies, and, before its conversion to the requirements of a cinema, was not in a very sound structural condition. The stage has been used in the new scheme for the organ, and the scene-dock and lower dressing-rooms have been remodelled in reinforced concrete to form generating, re-winding, and cinema rooms. The picture is thrown on the back of a transparent screen over about 24 ft. 6 in., so that no ray is visible in the auditorium.

The old boxes were removed and the orchestra sunk about 4 ft. below the level of the pit floor. Two exit staircases were removed from the inside of the building and placed outside on either side of the long lounge hall which joins the theatre to its entrance hall and café (first floor). The stanchions (or in this case cast-iron columns) supporting the two galleries were found to be of insufficient strength, and had to be removed and replaced, which entailed a lot of difficult propping and underpinning—operations which were carried out with complete success.

The difficulty of transforming an extremely old-fashioned Provincial theatre into an up-to-date cinema—and that in the short space of three months—should be borne in mind when considering this picture house. From the outset the scheme was specially intended to display colour-decoration in relation to architecture.

Here is a detailed analysis of the colour-scheme: In the entrance hall ivory and gold plasterwork is relieved by archaic panels—illustrative of Greek myths—with a uniform buff flesh tint throughout accented by brilliant primary colours on a black background. A wave ornament is introduced as a continuous frieze in each panel. Lamps in silk and wire designed with a Greek motif and colour-scheme complementary to the panels afford effective lighting. In the staircase hall are wooden pylons supporting massive tripods, containing ruby lamps, against a background of royal blue enriched with stencilled Greek ornaments in gold.



THE SCALA THEATRE, BIRKENHEAD: GROUND-FLOOR PLANS BEFORE AND AFTER ALTERATIONS.

In the café brilliant colour-panels of fantastic imagery are framed in vermilion lacquer against a background of rich black, running through which is an undulating powdered line of gold. Below the frieze rail is a continuous flight of deep crimson cranes in decorative silhouette, while above the dado rail a low mass of purple and blue conventionalized mountain peaks softens the mass of solid black into the more brilliant colours of the striped dado.

The high keynote of colour is maintained by the vermilion, white, and blue enamel with which the cornice and the rails of frieze and dado are decorated. A frieze in varying shades of parchment golds of geometric design, combined with cool grey pilasters, assists the general harmony. The carpet, being of deep mauve and black, shows the terra-cotta furniture to advantage. Furniture and silk lamps, on which are painted silhouette figures with rhythmical colour-patterns, are specially designed to enhance the general effect.

The predominating colour of the auditorium is orange, with lines of delicate mauve superimposed; the balcony fronts, surround of grille, and main structure of proscenium setting are of varying soft greys picked out with black and gold. Figures and check designs on the proscenium front and walls are in brilliantly coloured enamels. The two plaster lanterns, flanking the proscenium opening, and supported by gilded owls, are of red and black lacquer, a glazed with variegated colours. A large gilded mask Tragedy and Comedy surmounts each pilaster. The gri below the frieze and the key pattern above the orches show ruby lighting.

The entire stage setting stands out against a backgrou of gradated blue, while in each side pavilion is an abstra design in warm intensely coloured light. The electri tableau curtains are of rose-pink. A large number original lamps in painted glass and bronze hang from t ceiling, side walls, and around the fronts of both balconi but the main lighting is obtained from the central el trolier.

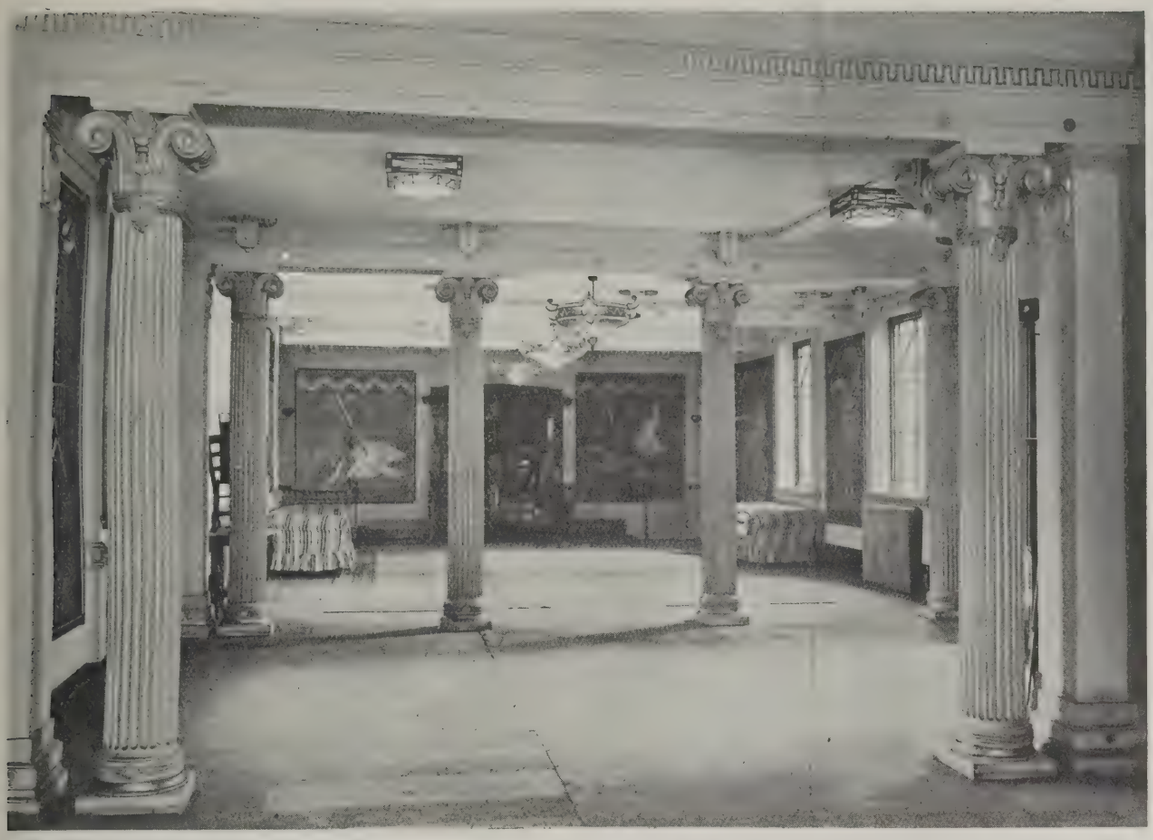
THE SCALA THEATRE, BIRKENHEAD: DETAIL OF PANEL IN CAFÉ.
JAMES S BRAMWELL, A.R.I.B.A., AND ARNOLD AUERBACH, ARTISTS.

The schemes for the waiting-rooms and passages have predominant blue note, and are designed to add to t general colour effect.

The general contractor was James A. Milestone, of Wallase All the steel and concrete work was designed by Mr. J. Bladon, architect and quantity surveyor, of Liverpool, a was carried out by the contractors. Messrs. McIntyre a Son, Liverpool, supplied all steelwork.

The following were sub-contractors: J. G. Nicholls, Lt Liverpool (glazing); Musgraves (Liverpool), Ltd. (sanita ware and fittings); Mackereth and Golland, Ltd., Liverpo (electric wiring); John Tanner and Son, Liverpool and Lond (plasterwork, fibrous and modelled); George Wragge, Ltd

In the café, brilliant colour panels of fantastic imagery are framed in vermilion lacquer against a background of rich black, through which runs an undulating powdered line of gold. Below the frieze rail is a continuous flight of deep crimson cranes in decorative silhouette. The furniture is specially designed to enhance the general effect.



THE SCALA THEATRE, BIRKENHEAD: VIEWS IN ENTRANCE HALL. JAMES S. BRAMWELL, A.R.I.B.A., ARCHITECT.

"EUROPA." PANEL IN SCALA THEATRE, BIRKENHEAD.

MINOTAUR AND SPHINX.

Manchester (metal balusters); Electrical Specialities, Ltd., Liverpool (electric-light fixtures); G. F. Thew, Ltd., Liverpool (door furniture, locks); S. J. Edwards, Birkenhead (folding gates, shutters, etc.); Waygood-Otis, Ltd. (lifts); S. J. Edwards, Birkenhead (heating and ventilating apparatus); Nicholson and Lord, Walsall (organ); The Liverpool Telephone (New System) Co., Ltd. (telephones); Arthur G. Cope (blinds); J. Bulman, London (transparent linen screen); Faulksley, London (electrical tableau curtains); Wolfe and Hollander, London (seats and carpets); Arthur G. Cope, Liverpool (scenery, draperies, and seats in upper gallery); Ker's, Ltd., Liverpool and Garston (shrubs and trees); Arthur G. Cope, Liverpool (metal and painted glass lamps); G. H. Morton and Sons, Liverpool (furnishing).

Building Exhibition Stand and Lay-out Competitions

We are able to announce this week that Mr. W. G. Newton, M.C., A.R.I.B.A., President of the Architectural Association, has courteously consented to act as assessor in our Building Exhibition Stand and Lay-out competitions. The object of these competitions is two-fold: (1) To show the architectural possibilities of individual stands, and (2) to show how the exhibition would gain by the adoption of an architectural plan in place of the present rather haphazard arrangement.

With regard to the Lay-out Competition, we should like to make it clear that the object in view is to secure an ideal plan, and that the existing arrangement of gangways need not necessarily be conformed to, though it is desirable that there should not be any reduction in the number of stands accommodated. The present total on the ground floor is approximately 250 of various shapes and sizes, and in preparing their new lay-outs competitors should estimate the number of stands that can be provided for, this number to be clearly stated on the drawing. Only the ground floor of Olympia need be dealt with; the galleries can be ignored.

Fifteen prizes will be awarded as follows:—

A.—For the Stand: first, £10; second, £5; third, £2; and five consolation prizes of £1 each.

B.—For the Architectural Lay-out and Treatment a prize of £10, one of £5, and five consolation prizes of £1 each.

Competition A.

With regard to Competition A, it is to be assumed that the stand will occupy a floor space of 16 ft. by 20 ft.

Designs for the stand, made on a single sheet of either cartridge or tracing paper, should include plan, sections, elevations, and perspective, to ¼ in. scale, drawn preferably in pen-and-ink, though wash rendering will be admissible.

Competition B.

The plan reproduced in our issue for February 8 is o last exhibition, and is given merely as an indication o area to be treated. A plan true to scale was reproduc the issue for February 22, and this should be followe competitors in preparing their lay-out schemes. (A b eye view and elevations and sections may be added if sidered necessary.)

In the likely event of any firm desiring to carry design on some future occasion the rights of compe remain intact, and designs will be published as copyrig with a note to that effect.

Readers may enter for both competitions, but they not submit more than one design in each.

The name and address of competitors should be under sealed envelope addressed to the Editors, and de should be submitted under a *nom de plume*.

Drawings marked "Exhibition Competition" shou packed flat or sent in a cardboard roll, addressed t Editors, THE ARCHITECTS' JOURNAL, 27-29 Tothill S Westminster, to arrive not later than first post on Mo March 27. They must be accompanied by the co which is given on page xxx.

Full particulars of these competitions were printed i issue for February 8.

"DIANA." PANEL IN SCALA THEATRE, BIRKENHEA

Correspondence

Higher Buildings in London

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Much discussion has been aroused lately in the public press as to the higher buildings for London. The R.I.B.A. having appointed a Committee, whom they presumably considered qualified to go into the whole question, have turned down the suggestions made in the majority report, and endorsed the minority report signed by one member only. This would look like the old Parliamentary game of setting up a Committee to enquire into a matter of public interest and then, after the report has been received, returning to the *status quo*. The Council, however, invite the general body of the R.I.B.A. to discuss the question in full at the Business Meeting on March 6, and it is to be hoped (I am writing before the meeting) that the members will take a more courageous and broader view than the Council and the Arts Committee have done.

London is a city of continual change, and in dealing with every problem of development the only way is to look well ahead and endeavour to foresee the requirements of the community in years to come. No one wants sky-scrapers in this country, and it is certainly a matter for very careful consideration as to how the regulations dealing with heights of buildings in various parts of the town should be framed (whether by zoning or by height in relation to width of streets, etc.), but to be content to leave the matter in its present unsatisfactory condition seems to reflect a muddled state of mind.

A building owner ought to be able to know exactly what he may do on any particular site, without having to await the decision of a Committee of the London County Council upon his special case, with the consequent expense and loss of time of preparing trial plans. Definite knowledge beforehand would quicken enterprise.

It is surely reasonable in the City of London, a section of the town in no way residential and entirely devoted to business, where increasing accommodation near to exchanges is essential, that a different standard as to the height of buildings, from other parts of the town, should be adopted. It is surely wiser from every point of view to encourage business firms to accommodate their clerks in large and spacious buildings conceived on a fine scale, rather than in cramped ones, and nearer the clean air of Heaven than towards the nether regions. If regulations, framed on the American plan of zoning, with buildings setting back on some recognized angle, with a much extended height within that angle, were adopted, it would encourage the acquisition of large sites, say, bounded by roadways on every side, on which splendid tower-like buildings could be constructed. Only by some such development can we get rid of the tangled c[illegible] and narrow thoroughfares of the [illegible]he fine treatment of American buildings (not sky-scrapers) shows us that it is not more difficult to deal architecturally with high buildings than with those of 80 ft.

If the business community expresses a need for higher buildings it would seem to be the part of architects to help forward rather than to stand in the way of these requirements, showing how they may be obtained in a manner that will be comely, and how they can be given artistic expression.

It seems to me that architects in their official, and in their private capacity also, should be the leaders and guides to the public in all matters to do with the development of towns, taking a broad and thoughtful view into the future. As long as they act merely in a conservative spirit, without vision, so will the business community look upon them as unprogressive and unfitted to deal with the larger practical problems.

OSWALD P. MILNE,
F.R.I.B.A.

Registration and Unification

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I have no wish to continue the wrangle on the question of Unification; but Mr. Keen, who is, we are quite sure, doing his best to stand by his Council, need not throw quite so much dust into the air. In spite of what he says, we must take the wording of the Council's resolution at its face value. When the Council says, "All architects of the United Kingdom," we must assume that this is an inclusive term in spite of any qualifying words embodied in the scheme. But if Registration is ever to be realized, it will be for Parliament and not the Institute to define who are to be included in the Bill.

Parliament will not take away any man's living, and all men who call themselves "architects" and gain a living, or a part of their living, as architects, will have to be protected in spite of any qualifying words adopted by the Institute.

For the time being, until the Bill is presented, the Institute can be as exclusive as it pleases, but, in the end, all architects of the United Kingdom, even though their interest is remote in architecture, will, in the words of the Council, have to be "included in the Institute."

To my mind the basic principle of Unification first and Registration afterwards, is wrong. We are not concerned with the details, they will not alter the wrong basic principle, which we are determined to oppose.

Our voices may not carry far, but I do hope that the Unification and Registration Committee will not persist in pursuing this wrong policy. If it does, we are convinced that it will find a large majority of the members of the Institute against the scheme; if, on the other hand, it attempted to get their Bill through Parliament first, the committee will have the almost unit[illegible]t of the Institute

HUBBARD.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Arthur Keen could scarcely expect that his letter in your issue of February 22 would remain unanswered. Although, on general principles, I have no fault to find with his remark that "those who deal with the business of the R.I.B.A. know exactly what an architect is, and are in no danger of mistaking an undertaker for one," yet it will be impossible to debar the architect-undertaker from membership under Resolution 1 of the Council, which provides for the admission of *all* architects.

It is, however, in another part of Mr. Keen's letter that its author's great creative imagination is more fully expressed. I refer to Mr. Keen's request for an explanation from Mr. Hubbard and myself, because, as he alleges, "after preaching Registration by Statute steadily for a great many years, and addressing meetings up and down the country on it," we are now "suddenly convinced that it is an impossibility."

In Mr. Hubbard's absence abroad, I venture to say that neither he nor I "preached Registration by Statute steadily for a great many years." For, as a matter of fact, our evangelical labours in that direction occupied our time and attention for about from three to four consecutive weeks. Further, we have neither become "suddenly convinced that Registration by Statute is an impossibility," nor have we ever said anything to that effect. This being the case, I shall be extremely obliged to Mr. Keen if he will endeavour to restrict any future remarks he may have occasion to make concerning me within the boundaries of truthfulness and fairness, even although, consequently, the force of his arguments may suffer some slight diminution. Many years ago Mr. Hubbard and I visited most of the allied societies and endeavoured, not unsuccessfully, to obtain their support in favour of the then new movement for the Statutory Registration of Architects. I have never gone back on the principle we advocated, and have since consistently supported any sound measures brought forward by the Council to advance the cause of Registration. But from past experience I am now enabled to realize, in their full significance, the numerous difficulties that have to be surmounted in *any* attempt to obtain the desired result. And I shall strongly oppose any scheme for ultimate Registration that omits to secure the welfare of the Institute, as at present constituted, pending what I am convinced will prove to be a long drawn out struggle for Statutory powers. And, despite Mr. Keen's remarks, I claim that my consistency in preferring the constitution of the Institute, as it stands to-day, to any so-called scheme of Unification—which nothing short of Statutory Registration *first* can bring about—has been shown in the past. As an example, I opposed the Council's efforts to tamper with the constitution of the Institute by the creation of the Licentiates class, but was out-voted. And in this connection I am not ashamed to add that *after* the acceptance by the general body of the Council's proposals

I did my best to make the new class of membership popular among provincial architects.

As to the suggestion that the opposition to the Council's scheme should be held over until the publication of further details, may I ask why, if these are essential, did not the Council hold its hand until the details were available; and why was no full discussion allowed when the resolutions were brought forward? And as both the supporters of the resolutions and those opposed to the resolutions made up their minds on *precisely* the same information, namely, that supplied by the report of the Unification and Registration Committee, it would also be interesting to know why the minority members of the Council are so frequently urged by the majority members to wait for the details of a *fundamentally* unsound scheme.

Yours faithfully,
ALFRED W. S. CROSS.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Messrs. Hubbard and Cross will do themselves good, even if they do harm to their cause, by stating their position in clear English. In their letter in your issue of the 22nd they say "we are as much in favour of Statutory Registration as ever." In their speeches on February 7 they said as clearly as they were able that they regarded Statutory Registration as quite unattainable. Do they now ask the profession to waste time and money in working out a policy which they are convinced can never succeed? If their minds are capable of ordinary logical processes, why do they not frankly advise the profession to drop the whole thing? By the by, the sequence which they now denounce—Unification first and Registration next—is precisely the sequence which they themselves proposed and supported so ardently in 1911.

Mr. Ashford is in such a mist of country members, London members, and Unification Committees that it is not easy to give him light, but I assure him that the Committee is as representative as it can possibly be made. It represents the R.I.B.A. in all its classes, the A.A., the Society of Architects, the provincial societies, the Colonial ones, the official architects, the unattached men. What more than this can Mr. Ashford desire? And may I remind him that the idea of getting the whole matter dealt with by a London meeting was that of the Defence League alone. I cannot predict the action of the Council, but it does not seem to me likely that it would be satisfied to settle such an important matter as this by a London meeting, called at short notice, and with no proper case laid before the members in advance.

I simply do not know what Mr. Ashford means by "a policy set in motion by 106 voting members," and therefore I cannot deal with it.

Mr. Percival C. Blow may well grudge the time and money spent in his wasted journey to London, but he has only himself to thank. If he would have read [illegible] carefully so as to know what the Council was actually accepting in principle, instead of taking Mr. Perks's fanciful interpretation of it, his time and money need not have been wasted. There is not the smallest intention on the part of the Council to rush the Institute in this matter—no good would come of it if there were—but the Defence League is trying to secure a decision on a false issue, and I can only advise members to wait until the true issue is before them.

"Probatum Est" again seems to be setting up a bogey to frighten himself. Where does his idea of swamping the class of Associates come from? It has certainly not come from the Council or from the Unification Committee.

ARTHUR KEEN,
Hon. Sec., R.I.B.A.

The Commercial Ideal

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I have read with interest your leader in THE ARCHITECTS' JOURNAL for February 22.

I am afraid there is an awful lot of rubbish talked about ideals. We contractors have ideals—as all architects have; the difficulty is to attain them. The necessities of commerce deprive architects, as well as those who work for them, of living up to the ideal life. It does not, however, follow that the ideal is killed, although it is frequently sacrificed. Until we live in an ideal world, such sacrifices are bound to continue. The best we can do is to work and fight for the ideal which every one of us possesses—often a thankless task—but if the ideal is sufficiently deep-seated, the struggle brings its own reward, which is in the joy of the fight as much as in the victory.

Yours faithfully,
A. W. MARTYN,
Managing Director,
H. H. Martyn & Co., Ltd.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I was sorry that your leading article in your issue for February 22 should discourage your readers from supposing that my views on the above subject are suitable for acceptance by architects, for it is in such pages as yours that I most value support. Dirty Dick, however, has us all more or less in his pocket. The President of the Birmingham Architectural Association, in discussing the paper, said that he hoped a leading shopkeeper would employ me to design his extensions, as it would be amusing to observe my consequent change of view; it seems, therefore, that in Birmingham, at any rate, the question is already compromised.

I am aware, too, of the power of the advertisement agent. Years ago an editor showed me a letter of stern expostulation from his advertisement agent, which raised objections to the young enthusiasm I had displayed in a certain column. The point the agent made was that if genuine enthusiasm was allowed so much rope what became of him and his counterfeit article?

The fact is, Sirs, that Dirty Dick is an ogre who has come near to possessing the earth, and threatens soon completely to do so unless his natural foes (among whom architects as members of a profession and de[illegible] of an Art are included), ma[illegible] greet him as [illegible] It is difficult [illegible] too false for[illegible]

to state things that are a great deal t[illegible] true. It is the hostage of Dirty Dick, [illegible] fact, who sets the fashion and, in effe[illegible] edits most publications; and when [illegible] attacked Dick I was well aware that [illegible] assailed him with a weapon of which [illegible] could, at will, completely disarm m[illegible] That weapon was publicity.

The press is, broadly speaking, [illegible] asset of commerce; and the press had b[illegible] to ignore my small voice to reduce m[illegible] to the obscurity of a mouse that squeak[illegible] once in Bedford Square. I rejoice, ther[illegible] fore, at the fine liberality of the pre[illegible] It is true that my name gives no weig[illegible] to my utterances; but I attacked t[illegible] system which is, necessarily, the soil [illegible] which the press lives; I flung gibes at t[illegible] press itself, and I expected to suffer t[illegible] extinguisher; yet extracts from m[illegible] remarks were reported with commend[illegible] tion in six or eight daily papers, and th[illegible] have been given conspicuous place in t[illegible] Architectural Journals, supported in mo[illegible] cases by expressions of editorial approv[illegible] Except a violent attack in one popul[illegible] daily, and your own courteous shieldi[illegible] of Dirty Dick from unkind treatment, [illegible] voice of disapproval, or even divergen[illegible] of view, has been raised. In addition [illegible] have received letters and messages fro[illegible] friends and acquaintances and strange[illegible] which, for their number and the warm[illegible] of their expressions of approval, m[illegible] fairly be described as "wonderful."

This may all seem vain-glorious se[illegible] applause on my part. I don't care if [illegible] does: it serves my object, which is [illegible] rebut your cold opinion that my co[illegible] tentions create an utterly erroneous i[illegible] pression of the general attitude of arc[illegible] tects towards the Commercial Ideal; th[illegible] they knock lustily at an open door or f[illegible] a figment; that the kind of Comm[illegible] cialism they condemn has little existe[illegible] to-day; that they contain no bro[illegible] truth; and that it is not necessary [illegible] pillory the Commercial Ideal. I stron[illegible] differ from you on these points, and [illegible] by the way, does the principal of one of [illegible] most famous schools, who seems to th[illegible] it *is* necessary to pillory Dirty Dick, [illegible] as I write, I learn that my paper is be[illegible] "read to the Sixth."

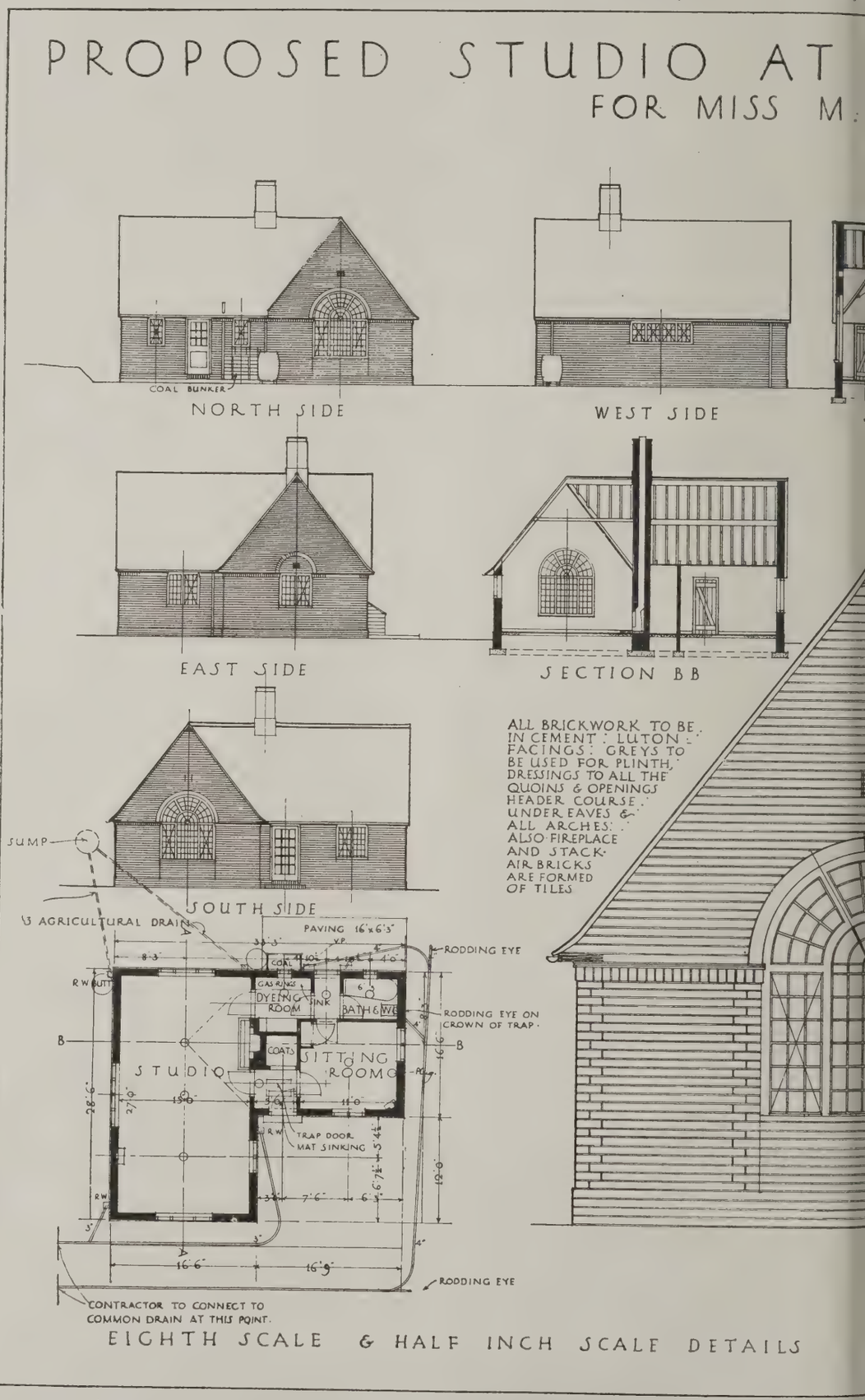
Unless this letter is to be of int[illegible] minable length it must be as short a[illegible] can make it; and your objections to [illegible] views are expressed so much in gen[illegible] terms that my only answer is to re[illegible] interested persons to the paper its[illegible] which is printed at length only in [illegible] current issue of the Architectural As[illegible] ciation's Journal. One or two poi[illegible] however, I would beg your permissio[illegible] touch on.

Charles Dickens did not in "H[illegible] Times" deal with the aspect of Comm[illegible] cialism which is the subject of my pa[illegible] He was attacking *inhumanity*—so[illegible] cruelties. Such occasion, as you righ[illegible] say, scarcely now exists; but the abu[illegible] were swept away *not*, as you sugg[illegible] under the initiative of new ideals [illegible] Commerce, but by the pressure of pu[illegible] opinion. And how was the public c[illegible] science roused? By the human ideal—[illegible] the moral passion of the poets who wr[illegible] the "Song of a Shirt" and "The Cry [illegible] the Children," of Artists, of think[illegible] writers, of philanthropists, of economi[illegible] and [illegible] of social and political leaders [illegible] t the commercial ideal of those d[illegible] von inch by inch, in years of strug[illegible]

(*Continued on page* 377.)

Architects' Working Drawing

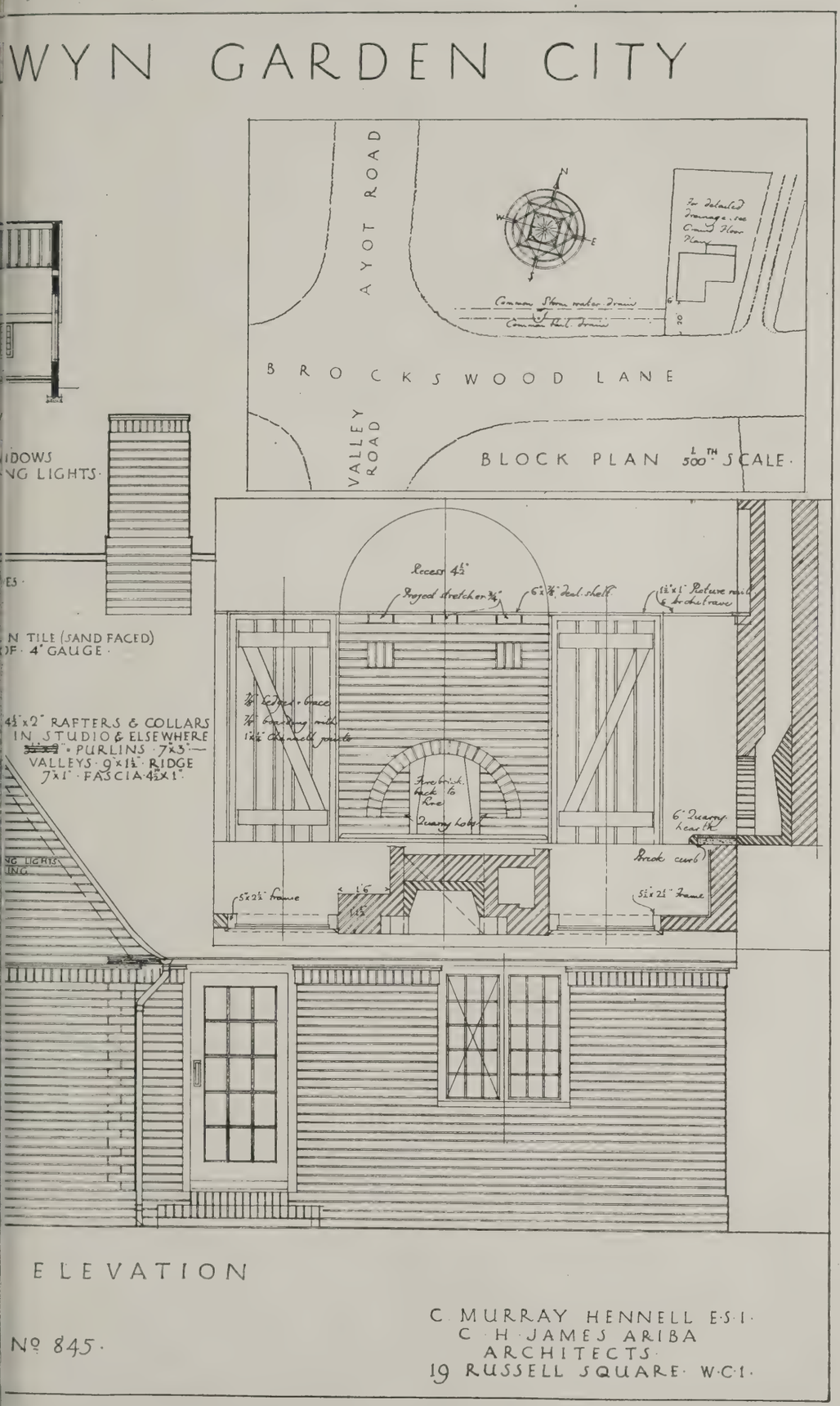
C. Murray Hennell, E.S.I.,



Welwyn Garden City is rapidly taking shape, much charming domestic work having already been erected some account is also given of the opening ceremony in connectio

dio at Welwyn Garden City

es, A.R.I.B.A., Architects



prominent architects. One example is illustrated above, and another is shown on page 378, on which Mail" section of this very interesting development scheme.

(*Continued from page* 372.)

position you point to blandly as ence of the generosity of Commer- sm.

ist as commercialism of seventy s ago kept young children enslaved s factories, and their mothers crawl- on all fours dragging kibbles in the ries of coal mines, so is the Commer- Ideal of to-day poisoning the soul of coming generation with its falsehoods, compelling its parents to crawl ctly in much dirtier paths than the lings of any coal mines. The fight ay is not across Social barriers, but ss Spiritual barriers. It is my view any one who is not aware of this must either be deficient in observa- and afflicted with induration of the cience; or that, having all his life thed air fouled by the emanations irty Dick's operations, he is unaware fresh air is the true fount of life, and can perceive nothing but an unusual and disagreeable sensation when it is fanned into his face.

I have read the suggestion made in the letter signed "Onlooker" that the balance could be restored if the better-educated and more cultivated members of the community were encouraged to engage in commercial pursuits. I am glad to observe that the writer appears to be in agreement with me, but he has in part misunderstood me. I do not deprecate Commerce, nor the men who are engaged in Commercial pursuits, and my chief protests are directed to the application of the Commercial Ideal to Art, Science, Letters, professions, and public standards of thought. A man has either to descend to the code of the calling he adopts or fail, and if he fails his influence is of no account. The better thing would rather be that high-spirited men should *desert* commercial pursuits so that the line of demarcation of ideals would be emphasized.

The fact that the Commercial Ideal is increasingly represented by men qualified to fill a conspicuous position and command—by various means—public respect, is the most lamentable aspect of the matter. In fact, if "Onlooker" had given his address I fancy it might have proved to be Tottenham Court Road or Oxford Street, for one shopkeeper has already advertised special openings in his shop for young men from our Public Schools, and another has publicly expressed himself as looking forward to a time when the Aristocracy of these Islands will be honourably engaged in retail trade.

H. B. CRESWELL.

In paying tribute to Mr. Creswell's sincerity of purpose we honestly deplore that he is so suspicious of sincerity in others. Our views were expressed in our leader for Feb. 22.—Eds. A.J.]

ittle Things That Matter. VII—Roofs and Chimneys

By EDWIN GUNN, A.R.I.B.A.

oofs.—In an earlier article reference made to the undesirability of exag- ting the eaves-tilt. Since that article eared several instances have come to notice where melting snow-water has trated tile roofs owing to excessive ening of the pitch at the very point re the greatest amount of water is ing. It must not be forgotten that rain water flowing down a roof is ulative from ridge to eaves. Fig. 26 vs the manner in which water is able enetrate a roof where the units of the ring are of insufficient *width* in rela- to the pitch. It is the inability to st these factors in a tile roof (owing he constant width of 6½ in. to 7 in. of 1 tiles) which makes it desirable that purlins, the wall stops, and the apex of the gable is hipped back. The window in the gable, with obvious good sense, is placed as high as possible so as to give the maximum light and ventilation, and to secure shelter below the eaves. It is all perfectly sensible and straightforward. Far otherwise is it, however, when this bonneting is made a "feature," and, as often seen, is penetrated by a chimney-stack, or contains a window which appears to have slipped down to a position where it must break the roof tie.

Placing of Chimneys.—Nothing shows so conclusively the careless or incompetent architect as the haphazard appearance of chimneys in isolated or inconvenient positions in the roof. There are, the roof. In that case the distance between the points where the chimney is exposed to driving rain and open to the room respectively may be a few feet only. Offset courses or projecting weatherings just above the roof slope are also useful.

If a chimney cannot be schemed so as to centre with the ridge a position beside the ridge is good. Such a chimney gains importance in appearance (from one side), and there are probably fewer constructive difficulties in this position than in any other, as the ridge is uninterrupted. A gable chimney well treated always looks fitting in a stone-built house where the walls are thick and the gable coped, but it does not look well as a rule in a brick house unless it is boldly projected and

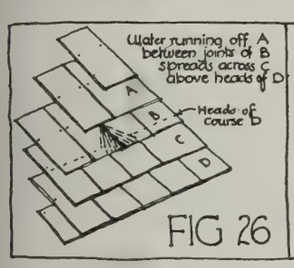
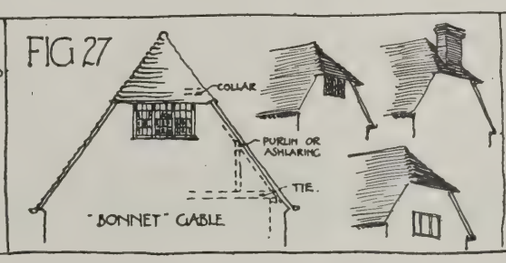
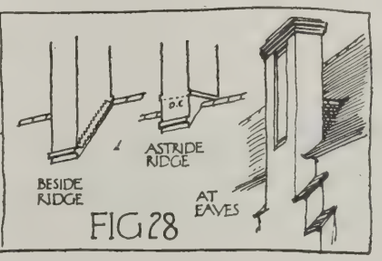


FIG 26





pitch of plain tiling should be over leg. Slates, of course, are not under disability, and may be widened as pitch flattens.

ipped or "Bonneted" Gables.— It ids like a truism to say that building truction ought always to *look* ra- al. There is no more rational feature, n logically carried out, than that mingly expressive piece of natural itecture, the Kentish or Sussex e (Fig. 27). To the imaginative eye it its own tale; it can be seen that the is tied at the plate, that the rafters supported twice intermediately by ins—the lower in line with the ash- g of the attic or loft, and the upper at ceiling-collar. Having been carried ufficiently high to support the upper of course, places where chimneys should never be allowed to break through—such as in a hip or a valley, both for appearance sake and for the weakening effect on roof structure. Chimneys which poke up through a roof slope intermediately between the eaves and the ridge also usually have a forlorn and unconsidered air.

What may be called the legitimate positions are ridge, gable, and eaves, and each has its points. The ridge is, of course, the most sensible position, since chimneys then have their greatest proportion kept dry, they stiffen the roof, and are less interfered with by vagaries of air currents. They also require less flashing and no gutters, but they *do* require a dampcourse just above roof level, and particularly so if there are rooms in defined right down to the ground; otherwise there is bound to be awkwardness and indecision as to the verge stop. This is even more true in the case of a chimney at the eaves. If it merely sticks up accidentally from the eaves level it looks either mean if it is low and stalky, or dangerous if high. Such a chimney needs to be specially sturdy and vigorous in design to satisfy the æsthetic conscience that it is not liable to be pushed over by the roof. It should project sufficiently far to make its emphasis a definite winner in the struggle with the eaves, and it should be united to the roof slope behind by a minor pitch-roof intersecting therewith, for which we appear to have no definite name, but which America knows as a "cricket" (Fig. 28).

Opening of Welwyn Model Village

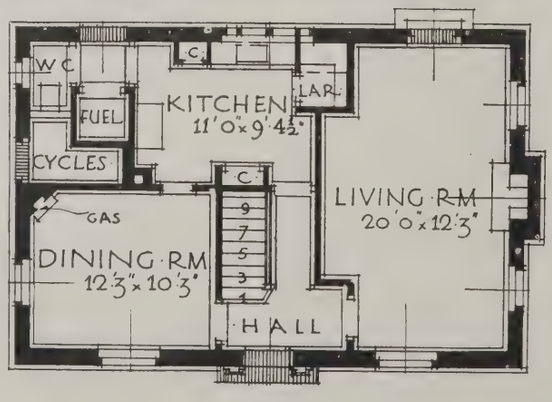
Spring sunshine and daffodils greeted Earl Haig and a goodly company, some 300 strong, who journeyed down to Welwyn Garden City last Thursday, as the guests of "The Daily Mail," to witness the opening of the model village that bears its name.

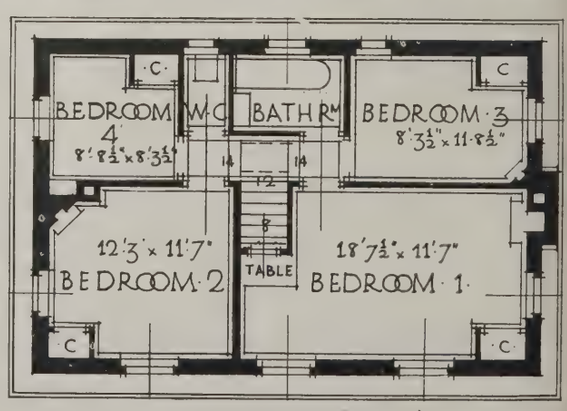
Sir Andrew Caird, who was in the chair at the luncheon, said that the village consisted of forty-one cottages, representing sixteen methods of construction. Welwyn was the first city to be built as a self-contained whole, with its own factories. The present population was 1,100, and they hoped that by July this would be increased to 2,000. The Ministry of Labour had given invaluable assistance, using the village enterprise for the instruction in building of ex-service men.

Lord Haig, who was enthusiastically received, thanked the Press and newspaper readers for the help they had given him in the work of re-establishing ex-service men, for whom there was great difficulty in finding employment.

Dr. Macnamara said that 60,000 men had been trained by the Ministry; 24,000 were still in training, while there were 30,000 still to come.

After lunch a move was made to village itself, where Lord Haig unve the village sign and inspected the hou The most striking feature of the vil is the Italian villa, designed by Mr. L de Soissons. Noteworthy also are Dorlanco steel-framed houses. In t the basis of construction is a steel fra and the outer walls are formed of crete, reinforced with Hy-Rib expan metal. The Parkinson-Kahn syste shown in a pair of cottages, and Economic Building Corporation are sponsible for two houses, ex-service for several houses, and the New Hou Construction Society, whose architec Mr. de Soissons, for the remainder.





HOUSE AT WELWYN, HERTS. HENNELL AND JAMES, ARCHITECTS.

The Ideal Classroom*

By GEORGE H. WIDDOWS, F.R.I.B.A.

T first sight it might appear to be an easy matter to deal with a classroom, but we have to remember not only have two public bodies to leased—the Board of Education and local education authority—in their orate capacity, but the requirements rtain individuals have also to be met, bly those of the inspector, the her, and the doctor. In the past person most concerned, namely, the l, has been overlooked, nor can it be that the authorities and officials re-mentioned have always been in nony, and perhaps the person most e pitied is the architect who has to g the divergent views into harmony re he can embody them in his plans.

e Ventilation of the Classroom

will begin with ventilation, and will on the assumption that all are in rd as to Professor Leonard Hill's ons for the need of ventilation, and : the primary need is a physical and a chemical one. I will further assume : all are now agreed that the simplest best way of providing ventilation is neans of currents of air passing across om. Further I will assume that where tilation is by means of windows only agreed that the best form of ventila- is by means of hoppers at the bottom he windows (and not at the top), and : of the remainder of the window all, tearly all, should be made to open in e form or other.

ow much ventilation is necessary ? know that it is necessary to carry off heat and moisture of the body. If can be accomplished by gentle means, whirlwind necessary ? One finds, in e instances, that some people are not tent for air to pass across a room and o a room fresh, but they ask, or de- id, that there shall be a rush of air ss a room or into a room even though ures and maps are made to rattle and urb the nerves.

has been shown that with 10 sq. in. opper opening per child on one side nlet, and a similar amount as outlet the other side, and with a wind-pres- : of no more than four miles per hour, air in a classroom can be changed ten es per hour by means of the hoppers /. On a winter day is any more essary, and if so, why ? Much dis- fort may be produced, and the chil- 's bodies chilled, and to counteract it may be stated that we can take the dren out and give them exercises. as to be remembered, however, that sical development is not the only g in connection with children. There he intellectual and spiritual develop- t, and one fails to see how the intel- ual development can proceed if the dren are working in discomfort. er school is over the children have ample opportunities of running about, of which as a rule they make full use.

The Question of Lighting

We now come to the question of lighting, and here I will assume that the usual rules as to glass area, height of windows, and so on, are accepted. The question arises : "Is the lighting to come from the one side only, or from two or three sides?" If from one side only, what is to be done on the other side to ensure through ventilation ? Here, too, I would ask that if the light comes from more than one side, and there are conflicting shadows, can it be proved that any harm results ? Lighting from one side, and that from the left, is undoubtedly more restful, but can you show that there is any injury by lighting from more than one side ?

I would draw attention to the lighting at North Wingfield, which is by means of a continuous skylight inclined at an angle of 60 degrees. Here the lighting is more than two and a half times that obtained by glass in a vertical position. The softness of the light coming from the north and from above is very marked. On the south side a dormer has been provided to admit sunlight to satisfy those specialists who say that sunshine should be admitted. When the sun is shining the sunshine overpowers the light from the north, and then curtains have to be drawn to keep it out. I have heard it stated by medical men of sound judgment that sunlight in classrooms is injurious to the eyes, and that in the case of North Wingfield the rooms would be much better if there were no dormer on the south side.

Were the light from the north and from above the only thing, the room would, of course, be depressing ; but both sides of the room have glazed doors opening into verandas. Those glazed doors of course, do not admit light, but they enable the children to see out, and if the doors have to be closed there is not that shut-in feeling that is felt in the ordinary classroom.

On the south side, while the sunlight does not pass through the glass of these doors, nevertheless sunlight can be seen, and when the doors are open the sun-purified air is constantly passing through. This method of lighting is, of course, only applicable to one-story buildings. In buildings of more than one story, it would probably be found that it could be applied on the top story only, but where it can be obtained may we take it that this is considered better than vertical lighting, and, as said before, are dormers admitting sunlight necessary ?

Serviceable Heating

In the matter of heating, low-pressure hot water, provided there is sufficient of it, would appear to be the most serviceable in ordinary buildings. In exceptional cases heating may not be necessary. At the St. Catherine's Convalescent Home for children at Ventnor some new classrooms have recently been put up, more or less on the North Wingfield lines, and no heating has been provided other than a few electric radiators. It has to be remembered that this building is almost at the southernmost point of our country, and that it is on the side of a hill facing south, and while it may answer here it does not follow it would be found satisfactory in the bleak damp atmosphere of some of our northern counties.

The Danger of Thin Walls

It would appear that in future we may be driven to using less material in our buildings. If the walls are reduced, what is the minimum that any wall should be ? If the walls are very thin, are the children nearest those walls likely to suffer from the extremes of heat and cold ? Recently at St. Thomas's School, Birmingham, which is built entirely of reinforced concrete, I was told that the walls are 4 in. thick. I learned that no discomfort is experienced with this thickness, and further that the building is free from condensation. A building we are erecting at Somercotes is made of concrete piers, the slabs between being 2½ in. thick. To be on the safe side I have lined the walls with asbestos sheeting, providing a cavity between the concrete and the sheeting. If the sheeting could be omitted, and the walls plastered, a considerable saving would, of course, be effected. The point is, what would be the effect, if any, on the children, providing these thin walls were adopted ?

We have made many experiments in Derbyshire with tables and chairs, and up to the present we have arrived at the following conclusions : That for infants a table to seat two is best, in the junior standards a table to seat four, and in the senior standards a table to seat six—all, of course, with separate chairs. The tables are of the folding type.

Colour in the Schoolroom

May I put in a plea for a more extended use of bright and cheerful colours in our schools ? Obviously each room should be taken on its merits, and given colours suitable to that room. This is, of course, a matter of time and thought, but more attention should be given to these things. A sparing use of good stencils would in many cases turn an indifferent building into a more presentable one. Many hard things have been said about the bright but simple colours we use in Derbyshire, but I do claim, and not without reason, that these colours have brought more life and cheerfulness to the teachers and children than was possible with the oxide of iron, cold blue, and terra-cotta with which it was alleged our schools were "beautified."

In the "ideal classroom" we ought to have pictures of real merit, and it would be well if each local education authority had its own picture gallery of reproductions where those concerned could see good pictures, and make a suitable selection for the school concerned.

*Extracts from a Paper read before the Medical ers of Schools Association. Mr. Widdows is Archi- and Surveyor to the Derbyshire Education Com- ee.

Art Exhibitions

The Drawings of Muirhead Bone

At the Grosvenor Galleries in Bond Street there is now on exhibition a series of Muirhead Bone's water-colours and drawings. "Here," says the delighted architect, "is a painter who can draw as well as I can!" And no wonder, for this painter, I believe, spent his early years in an architect's office. That is where his attraction lies. He is never vague or mechanical. He sees all that he draws, and draws all that he sees. Were he a composer and not a painter, his hands would never stray idly over the notes of his piano, nor would he indulge in cataclysmic chords at the expense of his air. Rather he is like Bach in his intellectuality, in his refusal to be pretty, in his lack of any gentler or fiercer emotion; a very pure draughtsman through whom the wind of his genius plays always in a single tone and with equal pressure.

There is a story that Bernard Shaw, going once to have his eyes tested, was told by his doctor that his eyesight was very peculiar because it was quite normal. It was not like ordinary eyesight, which is distorted. This applies beautifully to Muirhead Bone, who is essentially a normal man, a natural man; and in that he is unique, in that lies his genius. He does not take a wall or a roof and transform it into a poem like Walcot does. He is concise, he makes an accurate statement of fact. He does not have to go to old or queer things for his æsthetic reactions, because ordinary things attract him naturally, because he is able to appreciate the significance of ordinary things where other people are blunted by familiarity. Sheds, ships, machinery, factories, are intrinsically interesting and fascinating, so that he does not have to whack excitement out of them. When he draws a telegraph post he does not etherealize it, he does not make it sing or fly, for he is satisfied utterly by its conventional appearance, finding a beauty materialized there which is beyond refinement or embroidery. Here again there is a likeness to Bach, who does not have to employ elaborate chords in order to extract the full virtue of his note, but is satisfied with the single note itself, finding the beauty which he requires expressed in it completely, and seeing in elaboration only an obscuration of his effect.

But while Bone interprets what he sees literally, it should be noted that this literal interpretation has no sort of connection with the idea that art should copy nature, or that things should be drawn as they appear. He works in a convention just as much as the Primitives worked in a convention; and the fact that his is more realistic than theirs is due simply to a difference of temper and imagination. They see a spirit in everything, he a function; and he appreciates uses and functions so perfectly, and is so attracted by them, that he can do no more than express an object exact he sees it, so that the beauty which tinguishes a railway line or a boat telegraph post is exactly the be which is to be looked for in his drawi a beauty of adaptation to function, o fect and wasteless expression of fun

As an artist this intellectual relis functional and constructional for Bone's outstanding characteristic. study of his drawings, however, one say that he finds another interest i forms of ship and warehouse than which is purely abstract or intelle Strictly speaking, he is not a realist except in method, except materia his medium. Spiritually he is a conf romantic of a fantastic and delicate and this romanticism works in war it were, and is to be found late embryo—rather than vulgarly expr Of course, in some of his drawing cannot miss this tendency. In drawings as "The Old Port, Marse (47), which is reproduced below, "The Salvage Ship, Marseilles" where the rickety houses with thei blinds and bands of shadows smil on the water, and in his drawings streets, old wooden posts, old roofs, worn steps, his romantic relish fo action of life and the passing of t clear enough; but these are not reall drawings one likes to think of as t of Muirhead Bone. Rather one tu drawings like "The Railway S (44) or "The Careening Basin" (49),

THE OLD PORT, MARSEILLES. FROM A DRAWING BY MUIRHEAD BONE.

ıses and wharves and machinery—
ıgs for which he is unique.
t be said, however, that there is
nantic character in these? As-
it can. Indeed the choice of
even, is a romantic choice. Only
ntic could revel in factories and
s and cranes; to the ordinary
man-in-the-street they are horrible
—the signs of commercialism. Just
took a mathematician to write
in Wonderland," so it takes a poet
the sleepers on a railway line, or
ss pieces in a girder. Nobody else
o it except as the last resource; it
be too dull. And nobody could
ırders and railway lines, and ships
ıeir masts and rigging, and houses
legraph posts and factories, and
e church architecture, all jumbled,
er woven, together into a wonderful
—and suggest through all this the
ıd the bustle of life, the ceaseless
ent, the intricate activities, the
urrents, the innumerable interests,
he were himself a romantic of the
ics—a man with the liveliest
curiosity, of unflagging vitality,
led with a peculiar relish for all
hings which he is able to express so
fully. In addition to his intellec-
ıisterity, Bone seems to possess this
ble curiosity, and wonder and admir-
of the activities of the busy world.

H. DE C.

inski and Miss Ethel Sands

curious how soon a reputation for
supremely well a particular kind of
-and that particular kind only—
e established and, once firmly
. how seldom and difficult it is to
ıte it from the public mind. Our
t-day public will always associate
Doyle with Sherlock Holmes,
ewlett with mediæval stories, Mr.
ı Farquharson with sheep and snow,
Heath Robinson with elaborate
al jokes in which crazy pulleys
ɔlemn men with tiny hats do all
r of preposterous work. Now,
ɔainters and writers do not really
e to be considered so one-sided, in
ɔf early reputations. Forain and
tt did more than write mediæval
or draw devastating jokes;
ıs Hardy did more than write the
x novels . . . but the public per-
r ignores their other endeavours.
ch, injustice is dealt out; but it is
together the fault of the public,
writers and artists being consis-
guilty of cultivating a particular
either because hard cash is too
g, or because they are incapable of
he mildest eclecticism.
one time Bernard Meninski gave
ɜe of very fine things to come, but
seeing his later work on view at the
l Gallery, one wonders if he belongs
ıt second category of artists for
only little hope can be held out.
:t glance it looks as though most of
awings are studies for pictures, but
'e careful survey reveals the fact
ıere we have unfinished drawings
for their own sake. Unfinished,
ıre finished, so to speak, and the
tion consists of such drawings. It
refore but a *parti-pris*, an error in
velopment of any artist, which can
.ced back to seventeenth-century
ı virtuosos, and one from which only
too few young contemporary artists are free. But this weakness once pointed out, it is only fair to draw attention to the quality of these drawings, and it is a pleasure to acknowledge their rare vitality. If, in them, the influence of John is evident, this does not detract from their intrinsic worth.

Meninski is essentially a draughtsman; his one joy, it seems, is to abstract his subjects from all their surroundings, and insist upon the rhythm that he finds in them, a method similar to that of the great Florentine painters. All this, however, he does in pencil. His line is crisp and relentless, and the modelling obtained by simple means, blurring with the thumb being frequent. Most of the poses are very arresting and difficult of approach, and foreshortening seems to make repeated appeals to a mind as nimble and keen as the hand that serves it. Nos. 7, 36, and 74 are particularly beautiful drawings; they do give proofs of an intellectual audacity ever near obvious powers of self-expression.

To Miss Ethel Sands, who shows in the next room a fine collection of oil-paintings, art has little to do with the human figure. Hers is the world of inanimate objects: still-life and the thoughtful presentation of interiors, both of which she paints very well. She indeed excels in the delicate notation of colour values in interiors, chequered by lights and shadows, and she builds up her picture by small touches of pigment which set up the vibration of light and "sweete atmospheyre." Miss E. Sands is therefore an Intimist; but a certain prosaic lyricism, a something a little solid, makes her art more akin to Sickert's than to the French school. Yet she remains personal, and whatever she touches is endowed with a subtle reasonableness all her own. Even her strong predilection for jade-green and blue is alluring under the circumstances, and the "facture" of each little scene excellent. Her "Black Crucifix" (14) and "In the Attic" (15) are testimonies of a sound selective mind, and "Peacock's Feathers" (32), besides being an able oil-painting, has to us the added advantage of showing how fine panelled oak walls to a large dining-room can look when painted, say, a bold Venetian red, as is here the case.

G. HOLT.

Famous Hogarth Pictures

The trustees of the Sir John Soane Museum have just published a set of twelve post cards, in a specially printed envelope, of the famous Hogarth pictures, "The Rake's Progress" in eight, and "The Election" in four scenes. "The Rake" was painted in 1735, and "The Election" in 1754–7. A full account of the pictures is contained in the "Description of the House," tenth edition, 1920. It is curious to note that for these pictures, of such value to-day, Hogarth only received 176 guineas for "The Rake"; and the set was bought by Sir John Soane in 1802 for 570 guineas. David Garrick gave the painter 200 guineas for "The Election," and Soane bought the same at Mrs. Garrick's sale in 1823 for 1,650 guineas. The post cards have been reproduced by "The Rembrandt Intaglio" Company from photographs taken by Wm. Gray for the museum. The price of the set of twelve cards, which are sold at the museum, is one shilling. Postage is extra. The Soane Museum reopens to-day, Wednesday.

The A.A. at St. Swithen's Church

The late Mr. Ernest Newton, R.A., was known chiefly for his many delightful country houses, which followed the best traditions of English domestic work. Another phase of his work, not so well known, was his excursions into the fields of ecclesiastical architecture, and at least two churches in the neighbourhood of London were designed by him.

St. Swithen's Church, Hither Green, one of these, has been visited by the Architectural Association. The church is not a recent example of Mr. Ernest Newton's work, as it was built in 1893, and the chancel added in 1901.

Hither Green, like most of south-east London, is not an inspiring locality. One's first view of the church as seen from the railway station is a relief—a landmark to the many acres of chimney pots and slate roofs which fill the landscape. Standing on a slight hill one feels that a building of such refinement and dignity is well placed, for beauty gains in such surroundings.

The exterior of the church is of red sand-faced bricks with stone dressings, and the steep-pitched roof is slated. There is no tower, and the church is Gothic and Perpendicular in character. As it stands in a thickly populated district, it is difficult to see the exterior on all sides; the southern wall bounded by the vicarage garden is the best in this respect, and it is obvious that Mr. Newton considered that this elevation was the most important himself. It shows the transept bay with one tall narrow window filling the gable end almost the whole height. The strong vertical lines are repeated in buttresses at the angles, and the whole effect is robust and yet refined. This portion of the church is badly scarred, a reminder of the Zeppelin raids of 1915, when a bomb fell 60 ft. from the transept. Luckily no material damage was done, and no lives were lost, although a large number of people were sheltering in the basement.

The first impression of the interior is one of spaciousness and breadth, and on closer inspection this feeling is confirmed. There is a wide nave, two aisles, chancel, transepts, and a Lady chapel, and a gallery at the west end above the entrance lobby. The arcading is of stone, and the wall surfaces are left in plaster, although it is understood that these were to be decorated had the funds available been sufficient. The nave and chancel are barrel-vaulted in timber.

The amount of window space is large, and the church is correspondingly light, but the remains of the original glass show that the architect's intentions were for a softer light than there is at present. The original glass was destroyed in the Zeppelin raid already referred to, and the new glass is not an improvement. The full-size detailing to the tracery of these windows was carried out by Professor W. R. Lethaby, as at that stage of the work Mr. Newton was ill. The reredos, choir stalls, etc., which have recently been installed were not designed by Mr. Newton.

As Mr. W. G. Newton could not be present, Mr. Nicholson, who assisted Mr. Ernest Newton in the carrying out of the work, kindly explained any points to the party.

Factors of Safety

Referring to factors of safety in reading a paper on "What is the Use of the Modular Ratio?" before the Concrete Institute, Mr. H. Kempton Dyson said that Euler and succeeding mathematicians who developed the theory of elasticity, strangely enough, never devised a mode of computation whereby working stresses in slender pillars could be calculated. They merely told them the moment at which a pillar would fail, and left them to obtain the safe working load by dividing the ultimate load by a factor of safety. Only in regard to beam design had engineers changed over from the earlier practice of computing ultimate strengths and adopting factors of safety thereon.

Seeing how far astray those engineers could wander whose minds were concentrated on trying to calculate working stresses the author preferred to revert to the procedure of some generations of eminent engineers of the past, who based their practice upon experience and upon experiments made under practical conditions on full-sized or model members, and did not depend so much upon mathematical theorizing about ideally elastic materials and elaborate experiments that did not conform to practical conditions. Different factors of safety were adopted for the same material in different circumstances; that was to say, a railway bridge or a machine-part subjected to impact and fatigue had higher factors of safety than parts of buildings subjected to ordinary static loads.

As a result of the modern interest in the mathematical theory of elasticity great emphasis had been put upon the necessity of keeping within elastic limits or yield points. That was all very well in the case of ordinary mild steel for riveted structural members, because they needed a ductile material—that was, one in which the plastic deformation could be considerable. When they came to other materials, such as concrete and reinforced concrete, such very different conditions applied that they needed to view the matter from a different angle to that of the elasticians who, in order that their mathematical treatment should apply, asked for as elastic material as possible. In the case of mild steel they might contend that it came to the same thing whether they divided the yield point by, say, a factor of two, or the ultimate strength by a factor of four, in order to obtain a working stress—that was to say, to all intents and purposes the same result would be obtained whether they calculated the ultimate strength and divided it by four to obtain the working load, or whether they took the working load and made a calculation to keep within the stress derived by dividing the ultimate stress by a factor.

In the case of materials which were subject to much plastic deformation, however, the mathematicians' theory for elastic materials did not strictly apply, and should not be used as an argument in favour of the working stress method of elasticians. They could quite well figure the resistance in terms of any stress they liked, so as to give the working load straight away. The author desired to emphasize that such a stress must be derived from the ultimate stress that was estimated to be realized by loading to destruction, and was not the same as the actual stress at working loads which had become known as the working stress.

An engineer had to get on with the job, and make a practical solution with the best assistance he could get from the work of those engaged in scientific research. No doubt in time they would be enlightened much more as to the true nature and constitution of structural materials and as to such matters as fatigue, and in the light of such greater knowledge they might be able to reduce their factors of safety, but it was rather too much to ask them as a result of some mathematical analysis to declare that all the engineers of the past had not built thoroughly sound and safe structures.

The path of progress in engineering was to employ the best scientific knowledge to economize in material and labour, i.e., conserve natural resources. The ancient Egyptians and the Greeks with an elementary knowledge of building erected safe buildings at the expense of a great amount of slave labour and huge masses of material. Gradual progress had cut down the quantity of material required, and saved an enormous amount. Strangely enough, though there was a greater refinement to-day in structural engineering calculations than ever before, the same old factors of safety were used to determine working stresses as were adopted by earlier practitioners who employed much simpler methods of calculation.

Law Reports

Successful Appeals by Manchester Builders

Various Builders v. Manchester Overseers.

Feb. 25. Manchester City Sessions. Before the Recorder.

Judgment was given in a series of appeals by builders and contractors against rates levied by the Manchester Overseers upon buildings used by them in connection with contracts for the erection of houses. The appellants were Messrs. Tinker and Young, Ltd., Normanton and Sons, Ltd., Sir Robert McAlpine and Partners, Jackson Brothers, Robt. Carlyle & Co., J. and H. Bardsley, and G. and W. Smith. In all twenty-eight appeals had been entered, but when the matter was argued before the Recorder, Mr. A. J. Ashton, K.C., on January 18 and 19, it was agreed to take eleven which should be regarded as test cases.

Mr. Moxon, on behalf of the appellants, now asked what would be done with regard to the seventeen cases which had not been gone into. Mr. J. E. Balmer, for the Overseers, suggested that they should be respited, and it was agreed to do this.

In a written judgment read by the Deputy Recorder, Mr. Sandbach, the Recorder said that the Manchester Corporation, pursuant to authority given to them by the Ministry of Health, were engaged at all times material to the appeals in laying out large estates for the purpose of providing houses for the growing population. Contracts were made with various contractors, including the appellants, and in all cases but one the contractors erected on the building sites a series of buildings, such as a storehouse, a r mill, a joiners' shop, and a canteen which were necessary for the comp of the work which they had under In one case they utilized for simila poses a building used as a saw m land belonging to the Corporation—a ing, but not actually upon, the bu site. In his opinion this case stood the same footing as the others.

The respondents had rated all contractors to the poor rate in r of these buildings on the ground tha were in beneficial occupation. Th tractors having appealed he had to mine whether they were properly so In his opinion they were not, a allowed the appeals, subject to a being stated for the opinion of the Bench Division of the High Court, parties so desired.

The principle on which these must be decided was stated by Sumner (then Mr. Justice Hamilt Young *v.* Liverpool Assessment mittee (1911, 2 K.B.). In deter the question whether there was exc occupation of the premises, or c licence to use them subject to co three matters must be considered the nature of the business carried o the purpose for which they were pla possession of the premises; (2) the i ment itself and its terms; (3) the st the facts with regard to the buildin the user of them.

Here the parties had agreed as facts with regard to the building the user of them. They were al stantial buildings, and the appe admitted that none of them were ch The user was ancillary to the mai pose of the building scheme. W used as shops, or as storehouses, offices, or as engine-houses, they w used solely for the purposes of the done upon the building sites. Th tractor could not use the land or pr for any other purpose, nor, apart that, had he any right to be in any buildings which were the subject appeals. They were all upon Corpo land, and were placed where the Architect directed. Under Clau they became the property of the Co tion together with all the plan materials required for the work. those circumstances it appeared t that the contractors were there as licensees for the purpose of carryi their contracts. They came in the ing when work began, they were o to leave at night when working were over. In every twenty-four they came and went, and in every they were off the site for more tha the total number of hours in the Such discontinuous possession disp the possibility of exclusive occu in the contractors.

It remained to consider wheth whole contract disclosed that unc the circumstances the occupation contractors was paramount an occupation of the Corporation sub ate. In his view the occupation Corporation was paramount. On of the Overseers it was said that t sort of buildings which were erecte the uses to which they were put th tractors got such an occupation tha were rateable in respect of the se buildings. As he understood it, the ment was that a licence followed b

create rateability. That seemed able enough, but licences varied itely, and the question was, what the contractors licensed to do? were licensed to build on other 's ground, with other people's ials, and under the control of other at specified times. At any time reditaments might have to be given ing to defaults of the contractors ier parts of the building estate. these reasons the appeals were d with costs and the rate in each ust be quashed. Balmer asked that a case be stated, ie Deputy Recorder assented.

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tecting an Estate—Converting Houses into Flats

npbell v. Regent Estates Co., Ltd.

Feb. 28. Chancery Division. Before Mr. Justice Astbury.

s was an action by Lady George bell against Regent Estates Co., Ltd. airfax Luxmoore, K.C., and Mr. Nicholson Combe appeared for the ff, and Mr. Roger W. Turnbull for fendants.

Luxmoore said that the plaintiff what was a very large estate in Kensington, which was originally as the Alexandra Estate and now as the Campbell Estate, which ed the whole of Queen's Gate as and a large number of other . The action was brought to r possession of No. 22 Queen's Gardens on the ground that the nts in the lease had been broken nverting that house into service and that, having regard to the ter of the neighbourhood, was a ce to the lessor and adjoining s. There had been attempts to t a certain number of these houses rvice flats, and Lady Campbell had d complaints from the other tants in this district, and as the of these complaints she had had ng this and a number of other s.

defence had raised a number resting questions, but the defend- ere now prepared to agree to terms would result in their complying he plaintiff's wishes. The defend- id agreed to pay damages for breach nant and the costs of the action, ndertook to restore the dwelling- to its former condition, and on the g out of these terms the defendants be relieved against forfeiture of the Counsel added that another action g was to be settled on the same This action had been taken in hat Lady Campbell might protect enity of the estate, and also for the ion of other tenants who objected ice flats.

lordship made an order in accord- ith the agreed terms.

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e R.A.F. Memorial

stonework for the Royal Air Force ial on the Thames Embankment is hand, and Mr. Reid Dick, A.R.A., ulptor selected by the architect, ginald Blomfield, R.A., is actively l on the modelling of the bronze and globe. The monument is ed to cost £7,000.

Book Reviews

Building Contracts.

Mr. Edwin J. Evans, in his book on "Building Contracts: the Principles and Practice of their Administration," divides the subject into four parts, namely: (1) Administration of Contracts; (2) Office Management and General Notes; (3) Book-keeping, etc.; and (4) Trade Memoranda and Plant Lists. Each of these divisions except the fourth comprises about twenty chapters, each dealing with some special sub-division. Part IV, however, contains but two chapters—one giving memoranda for contractors, and the other comprising a short list of a contractor's plant, etc., in the order of trades.

Chapter I deals with "Methods Usually Adopted by Contractors to Obtain Business," and it may be said that the whole object of the book is, having shown how to get business ("first catch your hare, then cook it"), to explain how to handle it in the most businesslike way. Nothing incidental to the management of a building-contractor's business seems to have been overlooked. As Sir Charles Ruthen says in his "Foreword" to the volume, "Those who have been engaged . . . in the control of building works will readily agree that most of the troubles which constantly arise are directly or indirectly attributable to inexperience or carelessness in the preparation or administration of contracts"; and this volume will serve to mitigate both shortcomings. It is a book that should be at first thoroughly studied, and afterwards constantly consulted. It will remove much ignorance, and correct many bad habits and a few prevalent misconceptions. We welcome this notable contribution to the economics of industry; for it would be only too easy for the author to substantiate his statement that, while the building industry has been very liberally supplied with books dealing with its technical or constructional side, those dealing with its business or administrative section are, to say the least of it, not numerous.

"Building Contracts: the Principles and Practice of their Administration." By Edwin J. Evans. Foreword by Sir Charles T. Ruthen, O.B.E., F.R.I.B.A. London: Chapman and Hall, Ltd., 11 Henrietta Street, W.C. 2. Price 10s. 6d. net.

Kidders' Architects' Handbook.

What was once familiarly known as "Kidder's Pocket-book," but in the course of years grew much too bulky for its title, is now called "The Architects' and Builders' Handbook"; but as the volume, in spite of severe pruning and of succinct and well-compressed statement, still reaches the aldermanic bulk represented by 1,907 pages, the description "Handbook" is not so very much more appropriate than the discarded term "Pocket-book." If there is any virtue in the expression "Handbook" that term cannot be very fittingly applied to a book that weighs 2 lb. avoirdupois!

Such a trifling misnomer, however, will not bias anybody against a book that has become a classic work of reference for architects and constructional engineers who follow the American practice in design and construction, and for those who know how and when to adapt American practice to British requirements.

The book seems almost unnaturally complete, but that is because it is in its seventeenth edition, and has been compiled by a staff of specialists under the editorship of Mr. Thomas Nolan, F.A.I.A.

The changes in this issue go much beyond the very necessary, but still somewhat futile, alteration from Pocket-book to Handbook. Two new chapters have been added—one on specifications for structural steelwork, and the other on domical and vaulted structures; while the chapters that deal respectively with the fireproofing of buildings and with the closely allied subject of reinforced concrete construction have been re-written by Mr. R. P. Miller, while much new matter has been added to keep pace with the progress of improvement and discovery. One can easily understand that "Kidder," being found by the British architect extremely useful, must be to the American architect absolutely indispensable.

"The Architects' and Builders' Handbook." Data for Architects, Structural Engineers, Contractors, and Draughtsmen. By the late Frank E. Kidder. Compiled by a staff of Specialists and Thomas Nolan, Editor-in-Chief. Seventeenth Edition, enlarged. New York: John Wiley and Sons, Inc. London: Chapman and Hall, Ltd. Price, in England, £2 net.

Handy Steelwork Data.

Every architect should possess the latest list of "iron and steel always in stock for immediate delivery," which has just been issued by Messrs. C. C. Dunkerley, Ltd., of Manchester. Although it is simply called the "Stock Catalogue, 1922," it is in fact a very handy pocket book of general data on iron and steel, and no matter whether the architect specializes in the most intricate forms of steelwork or whether his only interest in the industry is an occasional r.s.j., here he will find just the information he requires. Recently the firm have built a new warehouse for the packing hoop department and entirely reorganized their bar-iron and steel warehouse, which is now equipped with up-to-date electric cranes. Some extremely interesting views of these warehouses, together with illustrations of the offices, the constructional department, and the joist and girder warehouses, are given in the catalogue. The mild steel employed by the firm for their r.s.j.'s and girders shows an ultimate breaking stress of 28 to 32 tons per square inch, and is equal to British Standard Tests. In the constructional department compound girders, stanchions, and all classes of structural steel can be riveted up from stock materials in a few hours.

Publications Received

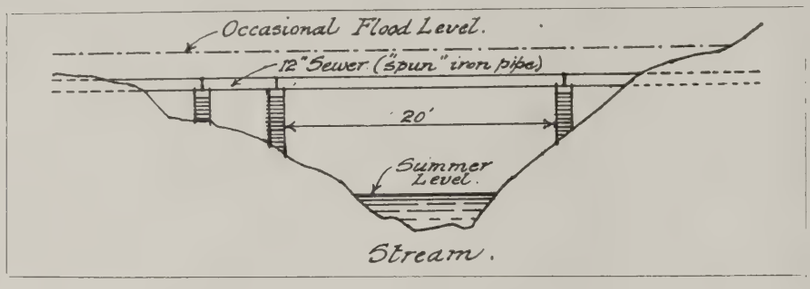
"Reinforced Concrete Simply Explained." By Oscar Faber, O.B.E., A.C.G.I., Council Member of the Concrete Institute. Oxford Technical Publications. Price 5s. net. Henry Frowde and Hodder and Stoughton, 1 and 2 Bedford Street, Strand, W.C.2.

"Academy Architecture and Architectural Review." A review of the Royal Academy Architectural Exhibition, London, and an architectural review of the Regent Theatre, Brighton; the Royal Free Hospital Out-Patients Department; garden and interior domestic architecture, sculpture, and cottage homes. Volume 53, 1921. Edited by A. E. Martin-Kaye. Net price, 10s. bound; 8s. 6d. paper. B. T. Batsford, Ltd., 94 High Holborn, W.C.

Enquiries Answered

Sewer over a Stream.

G. M. writes: "Can you inform me whether an iron pipe known as the 'spun,' made by the Stanton Ironworks Co., would be considered a reliable one for use as a 12 in. sewer, *above* ground, and also for bridging a stream (20 ft. clear span). Could I use a specially long pipe (say, 25 ft.) to bridge the stream, as I wish to avoid an understructure?"



—The "spun" cast-iron pipe made by the Stanton Ironworks Co. is quite a suitable pipe to employ for constructing a 12 in. sewer to be laid above ground. The pipes, instead of being cast vertically, as is usual, are made by a patented centrifugal process. They are made in 12 ft. lengths, and treated, during manufacture, with Dr. Angus Smith's solution. With regard to bridging the stream, it would not be practicable to put the sewer on piers 20 ft. apart without intermediate support. The pipe could be carried under a light trussed girder or between two rolled steel channels if it is essential to avoid any substructure.

Ventilation of Hollow Walls.

A. L. N. R. writes: "(1) Has an authoritative answer yet been given to the question as to whether the cavity of a hollow wall should be ventilated? It seems to be generally held that a jacket of *still* air round the building is necessary for insulation. How is it scientifically explained? (2) What are the best proportions for a finishing coat on plastered walls, to avoid danger of condensation? (3) Where, or how, can one obtain a good stain for internal deal joinery which is colder and greyer in tone than the stains most commonly used and supplied?"

—(1) A final and conclusive answer applicable in all circumstances is not to be looked for in this case—the matter is one for a balancing of factors. The considerations to be taken into account are: (*a*) As regards the primary purpose of the cavity—the exclusion of damp—it must be assumed if the form of construction is serving a useful end that the outer skin will at times be wholly or partly saturated. In this condition the air in the cavity will imbibe moisture, and if imprisoned will dry but slowly, and may convey damp to joist-ends and other vulnerable points in the inner skin. Cavity walls in which the inner skin is 9 in. thick or over are scarcely subject to this danger, and the matter can be judged on other grounds—there is, for instance, the obvious advantage of expedited drying if the cavity is ventilated. In these penurious days, however, cavity walls have come to mean in most cases 11 in. walls, and here the second consideration—heat insulation—enters. (*b*) I have found no walls so cold as 11 in. cavity walls with the hollow freely ventilated; yet for reasons given above it appears a wise precaution to provide some measure of ventilation. I take it that the scientific explanation would be loss of heat by convection in this wise. Assume winter conditions; the inner skin warmed by radiant heat, the outer skin cold from the atmospheric temperature, and probably damp as well. The warm inner skin would raise the temperature of the air in the cavity, which would hence be forced out by the heavier cold air outside, which would replace it, continually robbing the wall of heat. For some years I have made a practice of ventilating the cavity either from the cellar or space below open floors at bottom and to the roof space above; the floor space being, of course, ventilated from the external air. This indirect system retards the steady flow and consequent heat loss by convection, while ensuring some movement of air in the floor-space and cavity.

(2) I have found ordinary lime-plaster mixed in the customary proportions of from two to two and a half parts sand to one of lime and finished with a granular surface (from a wood float—what the plasterer calls "church finish") to be practically immune from condensation troubles. Avoid all "hard" plasters, and remember that even a granular finish will condense moisture (though less than a smooth one) if washable distempers with silicate constituents are applied.

(3) All the stains commonly supplied being also designed as preservatives, have as their basis creosote, and are therefore either warm brown or stained with some aniline tint. A grey stain can be obtained by washing over twice with a solution of one part silver nitrate in fifty of distilled water, then with dilute hydrochloric acid, and finally with water of ammonia, the wood being then allowed to dry and subsequently oiled or polished. I have succeeded in staining floors a very pleasant grey with a small quantity of lampblack ground in oil and thinned with turps. I have even used soot and oil, but this is, of course, without preservative properties. Experiment on a small scale might give the required result. I know of no commercial preparation giving this tint. G.

Obituary

Mr. S. J. Dicksee.

It is with deep regret that we announce the death of Mr. S. J. Dicksee, brother of Mr. F. B. (Frank) Dicksee, R.A., and head of Messrs. Foster and Dicksee, Ltd., of Rugby and London, builders. Established about 122 years ago by an ancestor of the late Mr. John Bromwich, the ness passed into the hands of M Foster and Dicksee about forty years ago, and was converted i private limited liability compar 1907, when Messrs. Edward Go (London manager) and W. J. S (country manager and surveyor) b partners. During the last six yea of these gentlemen have passed One of the oldest employees of the pany, Mr. Frank Satchell, who had connected with the works for over years, died at the end of last Among the many important bui erected by the firm are the Law extension, the National Telephone pany's building, the Public I Office, Duchy House, Strand, the ruptcy Buildings, the War Office in W hall, and King's College Hospital, mark Hill.

Of Queens' Gardens Olympia

Familiarity with the Ideal Hom engendered, we suspect, a certain di tion of enthusiam among those days are spent in designing hom every shape, size, and description such Olympia will possibly have attraction. They may fancy that have seen it all before, and, if no there be, the morning "Daily will supply all necessary informatio

Nevertheless, every architect aspires to the perfection of comple in the houses of his creation should ney to Kensington, make his way th the orderly array of stands, and behind the screens to a fairyland of and colour, an enchanted place o lights and rushing waters.

The gardens are not very big, the ten of them confined within the n limits of the Annexe, but what the in acreage they make up in variet completeness. There is the formal ning of old England, with its stone yew hedge, pool, and fountain, cor ing with the delicious wildness of Pr Mary's waterfall and rockery. A phony of blue gladdens another c and the sweetness of massed hya pervades the whole place, save azaleas in an orange blaze fling out a fragrance of their own.

The gardens are an education in e and seeing them one realizes to th the unsurpassable beauty of shee colour, as compared with the usua cellany of contrasting groups. paving is now apparently the only although we must confess to a craving for paths of springy turf, a engaging variety of garden orna leaves no excuse for unfinished vis

It is hard to tear oneself away fro cool peace of the Annexe and fac warm confusion of the main buildin there are things well worth a visit.

The general arrangement is in delightful, the exhibits being grou classified sections. Thus constr and sanitation are found togethe heating and lighting firms are near bours, while the gallery is an or labour-saving devices. Furnishin decoration also are well represente the total number of exhibits refut pessimists who contend that ente and invention are dead in British ind

The Week's News

Walthamstow Memorial.

hamstow's memorial cenotaph is rected in Lloyd Park.

Marylebone Police Flats.

s are to be built for married police- Marylebone.

Limit for Bricklayers in America.

le union rules fixing a limit to the r of bricks which members may ve been abolished in America.

Lord Kitchener Memorial.

emorial to Lord Kitchener is to be l on the Horse Guards Parade. emorial is to cost £10,000.

Reinforced Concrete Footpaths

footpath on the Exmouth Pro- e has recently been reconstructed forced concrete.

llington College War Memorial.

as been decided to adopt the plans enotaph prepared by Sir Edwin L. ns, R.A., for the north aisle of the .

yal Society of British Sculptors.

W. Reynolds-Stephens has been President of the Royal Society of Sculptors and Mr. F. W. Pomeroy, vice-president.

Blackpool Improvements.

s are being prepared by Mr. T. A. n, landscape architect, for the action of a park at Blackpool, it is claimed, will be one of the in Great Britain.

Rebuilding Salonika.

rovisional contract for sewers in tion with the reconstruction of the of Salonika has been secured by bert McAlpine and Sons (Ltd.), of n.

St. Pancras Housing Scheme.

St. Pancras Council Finance Com- recommend that application be to the London County Council for n to borrow £72,928 for the Brook- ousing scheme.

R.I.B.A. Annual Dinner.

annual dinner of the R.I.B.A. will place at Prince's Restaurant on sday, May 24. Members are par- ly requested to note the date and ep the evening free from other ments.

Architectural Practice.

F. G. Coates, M.S.A., has resigned sition as surveyor to the Frinton- Urban District Council, in order to ence private architectural practice. ldress for the present will be "Out- Third Avenue, Frinton-on-Sea.

Devon Abbey Built by Monks.

Buckfast, Devon, the monks of rre-qui-Vive are putting the finish- uches to their new abbey church. been erected on the ancient pre- nation foundations, and will be l next August. Sixteen years ago st cartload of stones was conveyed site. The church is intended as a rial to Abbot Boniface.

The Rebuilding of Cork.

Mr. Michael Collins, head of the Provisional Government, has informed the Cork Corporation Committee that his Government are prepared to find £250,000 towards the rebuilding of the burned portion of the city.

Qualifications for R.I.B.A. Probationers.

Applicants desirous of qualifying for registration as Probationers, R.I.B.A., must in future produce drawings showing an elementary knowledge of freehand drawing instead of examples of geometrical, perspective, and freehand drawing.

Jersey Electric Lighting.

The Assembly of Principals and Officers of the parish of St. Helier have adopted the municipal scheme for electric lighting, and authorized the Mayor of St. Helier to take the necessary steps to raise a loan of £100,000 for the carrying out of the scheme.

Proposed Pavilion for Bournemouth.

The Mayor (Alderman C. H. Cartwright), speaking at the annual dinner of the Master Builders and Allied Trades, said that it had been felt for many years past that they required a first-class place in which to house the municipal orchestra whose reputation was known all over the world. A pavilion was suggested, and he still ventured to think that the provision of such a place was one of the crying necessities of the town.

Limehouse Churchyard.

Sir Alfred Kempe, Chancellor of the Diocese of London, at a Consistory Court sitting in St. Paul's Cathedral, has granted an application for the right to utilize a small portion of the disused burial ground of St. Anne's Church, Limehouse, in the course of the proposed widening of Commercial Road East. The portion of the churchyard required for carrying out the improvements was closed for burial in 1853.

Sir Evelyn Wood Memorial.

A mural tablet to Field-Marshal Sir Evelyn Wood has been unveiled in the crypt of St. Paul's Cathedral. The tablet, of statuary marble, with a conventional decoration, is inscribed as follows: 1838–1919. Evelyn Wood, V.C., G.C.B., G.C.M.G. Midshipman, R.N., 1852. Field-Marshal 1903. Crimea, Indian Mutiny, Ashanti, South Africa, Egypt, Soudan. Sirdar, Egyptian Army. Adjutant-General to the Forces. Intrepid in action, untiring in duty, For Queen and Country.

The Problem of the Small Town.

Captain R. L. Reiss, Chairman of the Town Planning and Garden Cities Association, lecturing on "The Problem of the Small Town," to the Cambridge Architectural Society, said that the architect had his province after the sociologist and the economist in the planning of modern cities. The civilization of the future was to consist in the industrial towns, wherein healthy conditions, segregation of the industrial and residential areas, transport and shopping amenities, and a well-designed civic centre were of the first importance.

Proposed New Building for Durban.

It is reported that Messrs. Norman Anstey & Company have acquired a site in West Street, in the business heart of Durban, and that they propose to demolish the present building and erect a new one of four storeys in its place. The senior Trade Commissioner of Johannesburg states that he is informed that Mr. Anstey is now considering the plans, and suggests that firms specializing in the design of departmental stores may care to get into touch with Messrs. Norman Anstey & Co., Anstey's Buildings, Kerk Street, Johannesburg.

Whistler and Méryon.

Signed with the butterfly—the mark of Whistler—a few etchings have been sold at Sotheby's at high prices. The only state of "Little Venice" brought £300, one of "The Long Lagoon" £245, a fifth state of "The Traghetto" £265, one of "The Two Doorways" £205, and twelve etchings from nature, known as "The French Set," £165. There were several examples by Charles Méryon. A fourth state of "L'abside de Notre Dame" brought £120, a fifth of "Le Pont Neuf" £112, and a second state of "Le Petit Pont" £130.

L.B. and S.C. Electrification Scheme.

At a meeting of the Industrial Group in the House of Commons it was urged that if effect could be given to the scheme for electrification which has been prepared by the London, Brighton, and South Coast Railway Company, it would mean the placing of contracts representing several million pounds and the provision of a large amount of employment. A deputation is to wait upon the Parliamentary Secretary to the Ministry of Transport and invite his assistance to enable the company to proceed with its scheme without delay.

The Abbey Church of St. Albans.

The fourth of a series of lectures on the architecture and ecclesiology of the Abbey Church of St. Albans, organized by the Council of the St. Albans and Hertfordshire Architectural and Archæological Society, has been given by Mr. C. H. Ashdown, the secretary. The lecturer deplored the fact that no national system of architecture could be defined with certainty at the present time. Visits were paid to the Presbytery, the Watching Tower, the Tomb of Humphrey of Gloucester, the so-called Wheathampstead Chantry, the High Altar Screen, and the Ramryge Chantry.

British Non-Ferrous Metals Research Association.

The second annual report of the British Non-Ferrous Metals Research Association of Birmingham contains an interesting record of a very wide programme of research which is now in hand. This Research Association participates in the fund of £1,000,000 created during the war by the Government to encourage the wider application of scientific methods in industry. Several of the more important researches relate to subjects of great practical importance in connection with

building and constructional work. Mention must specially be made of the research upon atmospheric corrosion of non-ferrous materials, which is under the direction of a committee upon which the R.I.B.A. is well represented. Amongst other researches that are noted are the investigations on metal polishing; the jointing of metals, including brazing, soldering, and welding; and an important research on brass casting.

Building Materials.

Mr. Baldwin stated recently in the House of Commons that he was aware of the existence of trade combinations of various kinds in respect of building materials, but he would point out that neither the Sub-Committee on Building Materials appointed under the Profiteering Acts, nor the Special Committee appointed by the Minister of Health last July, had found that any such combination had acted unfairly. He was not at present in a position to make any statements as to the prospect of the Government's introducing legislation to deal with trusts in trade and industry.

Holidays in Belgium.

The Great Eastern Railway Company have decided to run again this year the short sea service between Harwich and Zeebrugge, which provides a very convenient route for visitors travelling to the Belgian coast resorts, Blankenberghe, Heyst, and Knocke, also Bruges, Ghent, and other parts of Belgium. The service will commence on June 1, and will be run six times every week in each direction instead of three times as last year. Restaurant and pullman car non-stop express in connection with the steamers will leave London (Liverpool Street) at 8.40 p.m., and in the reverse direction will bring passengers into Liverpool Street at 8.0 a.m.

Ulster Society of Architects.

A general meeting of the Ulster Society of architects has been held at Belfast. In the unavoidable absence of the president (Mr. R. M. Young, F.R.I.B.A.) the chair was occupied by Mr. J. St. J. Phillips, A.R.I.B.A., vice-president. The hon. secretary (Mr. W. C. Maxwell) gave a statement of the work of the various committees as reported to the Council through their conveners. An interesting discussion followed, which was taken part in by Messrs. Calwell, Eager, Henry, Houston, Kennedy, and J. R. Young, with regard to the Parliamentary Committee's action in regard to the proposed new law courts for Northern Ireland, and the new schools to be erected under control of the Ministry of Education.

Mr. Brock on Beauty and Health.

Mr. Clutton Brock, lecturing to the Guild of Health in London on "Beauty in relation to Health," said that if we would enjoy the best of health we must learn seriously to appreciate what was beautiful, and cultivate the beautiful in personal dress, in environment, and in varying forms of personal expression. He regarded the appeal of loveliness to the eye as a means by which vitality was reinforced and stimulated. With regard to the influence of beauty in architecture, he said that tired English folk had to go to Rome or some like city for rest and solace simply because they could not find them in their own cities. Beauty in architecture meant health.

Exhibition of Architects' Working Drawings.

As the Exhibition of Working Drawings at the R.I.B.A. has been greatly appreciated by students and junior members, at the special request of many of these the period of opening has been extended to 7 p.m. daily (Saturdays 5 p.m.), until the termination of the exhibition.

Arrangements have been made for holding a special students' evening on Wednesday, March 15, at 8 p.m., in connection with the exhibition. Students from the architectural schools and others are invited to attend.

The architects of the buildings, the working drawings of which are exhibited, have kindly consented to be present, and will give students information on special points of interest. No cards of admission are required. Light refreshments will be provided.

New Students R.I.B.A.

The following candidates, having passed satisfactorily through the architectural courses at the "recognized" schools indicated against their names, have been registered as "Students R.I.B.A." The asterisk (*) denotes students exempted from the Intermediate Examination under the Special War Concession to Probationers : —

Arthur, Eric Ross (Liverpool University), 6 Peterborough Road, Wavertree, Liverpool.
Beaumont, John Somerville (Victoria University, Manchester), 24 Brazennose Street, Manchester.
Butler, Bertram (Liverpool University), 31 Priory Street, Dudley.
Chatterley, Arthur Oliver (Liverpool University), 73 Oriel Road, Bootle, Liverpool.
Cogswell, Victor Gordon (London University), Sunnicote, London Road, North End, Portsmouth.
Cooke, Edith Gillian (Architectural Association), 18 Airlie Gardens, W.8.
Edmunds, Edwyn Emrys (London University), "Cartre Clyd," Cradock Street, Swansea.
Elijah, Samson Abraham, 2 Jail Road North, Bombay (9), India.
Gimson, Humphrey Morley (London University), 713 Aylestone Road, Leicester.
Harvey, John Dean Monroe (London University), 42 Castelnau Mansions, S.W.13.
*Helbing, Vernon Adolphus Joe, 184 Altmore Avenue, East Ham, E.6.
Hirst, Harold (Liverpool University), 93 Hale Road, Walton, Liverpool.
Hughes, Eleanor Katherine Dorothy (Architectural Association), c/o The Architectural Association, 35 Bedford Square, W.C.1.
Hutton, Chalmers Henry (Liverpool University), 10 Town Lane, Rock Ferry, Cheshire.
Jenkins, Thomas Trevelyan (Liverpool University), 6 Tennyson Street, Princes Park, Liverpool.
Khan, Hasankhan Hayat (Sir J. J. School of Art, Bombay), Anjuman-i-Islam High School, Bombay.
Law, Oliver William Mafeking (London University), 64 St. Augustine's Avenue, South Croydon.
MacDonald, Alister Gladstone (London University), 9 Howitt Road, N.W.3.
*Moxon, Cecil Horsfield, "Winterbourne," Bretton West, near Wakefield.
Musker, Doris (Liverpool University), Rest Cottage, Upper Colwyn Bay, N. Wales.
*Newton, Frank, "Greenhythe," South Avenue, Littleover, Derby.
Patker, Purushottam Mukund (London University), 22 Harvey Road, Gamdevi, Bombay, India.
*Powell, William Thomas, 6 Dudley Road, Kilburn, N.W.6.
Prynne, Harold Fellowes (Architectural Association), Secretariat, P.W.D. Chepauk, Madras, India.
Reid, Alexander Simpson (Robert Gordon's Technical College, Aberdeen), 221 Clifton Road, Aberdeen.
Ryle, Winifred (Architectural Association), 16 Gordon Square, W.C.
*Saise, Alfred John, 4 Guinea Road, Fishponds, Bristol.
Scotland, George Bruce (Glasgow School of Architecture), 12 Broomknoll Street, Airdrie, Scotland.
*Seaton, William George, 22 Mackintosh Road, Pontypridd, Glam.
Shroff, Lovji Framroz (London University), 34 Westbourne Road, Barnsbury, N.7.
Wesker, Sefton Ernest Ellard (Liverpool University), 4 Beckenham Road, New Brighton, Cheshire.
Williams, Edwin (Liverpool University), 201 Edge Lane, Liverpool.
Winn, Thomas John Rosewarne (London University), Trevone, Truro, Cornwall.
Yoxall, Thomas (Liverpool University), 47 Coltart Road, Princes Park, Liverpool.

New Inventions

Latest Patent Applications.

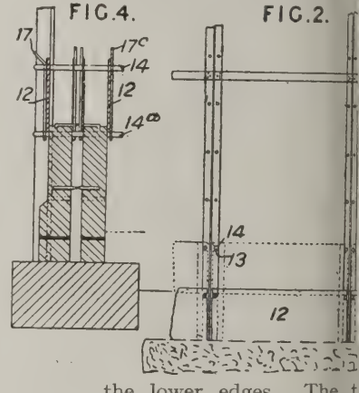
4211.—Blake, J. P.—Concrete etc. February 13.
4169.—Brown, E. O.—Apparatu manufacture of concrete blocks, etc. February 13.
4420.—Clarke, W. W.—Constru walls of buildings. Februa
4500.—Heath, W. G.—Device for porting shuttering of reinf concrete, etc., tubes. ruary 15.
4322.—Rowley, A. J.—Building structions. February 14.

Specifications Published.

174665.—Airey, E.—Construction c ternal walls of buildings.
174729.—Davidson, T. G.—Means building walls or the lik concrete or other material.
174749.—Brown, T. A., and Walker, Building blocks and the ere of building construction t with.

Abstract Published.

173577.—Casting concrete in si Norman, S. H., Oakley Cc Westminster Bridge Road, don.—In shuttering of the in which slotted or perfo uprights are used, the shu 12 are supported and posit laterally by two series o movable transverse mem 14, 14*a*, one series pa through holes or slots 13 the upper edges, and the series being located adjace



the lower edges. The t verse members are prefe united in pairs to form " pin" or V-shaped supports the shutters are secured ag lateral displacement by " pin" ties 17, 17*c*, which er holes in the transverse mem The vertical edges of the ters may be rabbeted at lower ends to facilitate th sertion of reinforcing-men or wall ties; the core shu are recessed to fit wall ties. spaces between the edges o shutters forming the inner may be bridged by rectan plates; the grooves left in face of the wall after remov the standards may be trim or bevelled.

The above particulars are specially prepar Messrs. Rayner & Co., Registered Patent Ager 5 Chancery Lane, London, from whom readers Journal may obtain all information free relati patents, trade-marks, and designs. Messrs. Rayne will obtain printed copies of the published specific and forward on post free for the official price of 1/

ne Exhibits at the Ideal Home Exhibition

Bryscom.

yscom, the new building stone ied at Draycott, Somersetshire, by Bryscom Quarries, Ltd., is being n on Messrs. Gilliam & Co.'s stand in arden Section. This attractive red offers a new and unlimited scope e architect for cottage, bungalow, h, or country house work, as well as naller fittings, such as steps and sills. Rodney Stoke Inn at Draycott and ncot," a country mansion near Wells, recently been built of this stone. It t necessary to use the stone on the e of a wall; it can, if desired, have a or slab backing, although it is ed that Bryscom will compare rably in price with all other building rials.

Mellowes's Ideal Bathroom.

e ideal bathroom shown by Messrs. wes & Company, Ltd., of London Sheffield, specialists in sanitary ment, is an example of the successful ination of beauty and utility. It is tinct departure from the orthodox, in style and decoration, and the t is not only extremely sanitary and ical, but creates a sense of luxurious ith and pleasurable comfort. The oom is panelled in Bleu Belge le directly imported from the Bel- quarries. This marble is jet black e body, with a decisive white and vein. A skirting and fillet of marble erted in suitably contrasting colours rmonize with the general decorative ne. The floor is of terrazzo, with drant" margins forming a joint with narble 1½ in. above the floor line. w selected and characterisitc types e firm's sanitary equipment are also ited.

The Adamite Stand.

e of the most attractive stands is delightful little Grecian temple, iiscent of the monument of Lysi- s, designed by Messrs. Mewès and s for the Adamite Co. Atlas White and cement is here shown with ex- it effect, and Colemanite, formerly n as Anti-Hydro, is also exhibited. nnection with the latter it may be l that this material has been used great success as a concrete hardener waterproofer for over seventeen in America, and for over three in this country. Although the has been changed, the material will nue to be manufactured by the Hydro Waterproofing Company of ica, and may still be obtained from damite Co., Ltd., of Regent House, nt Street, London, W.1. "Cole- te" has been found specially useful nnection with the construction of ouse and factory floors, and fuel nks. A liquid compound containing cium chloride base, the material is simple to use. All that is necessary add one gallon of the material to ten gallons of gauging water. It fact, claimed that the addition of manite" to the gauging water of a wo sand-cement one-inch floor top- will produce practically wearproof factory floors that are also economical in first cost. "Colemanite" will remain precisely the same material as that sold in this country as "Anti-Hydro" during the past three years.

The "Stannos" System of Wiring.

The exhibit of Messrs. Siemens Brothers & Co., Ltd. takes the form of a room wired for electric lighting, heating, etc., on the firm's "Stannos" system of electric wiring. A model is also being exhibited to demonstrate the application of the system to housing schemes. The model shows the method of introducing electric supply by means of a transformer installed in the nearest cottage to the main power cable. From this transformer a "Stannos" conductor is carried along the outside walls of each group of cottages, and the supply tapped to each cottage through the main wall. Between each group of cottages the "Stannos" main is buried directly in the ground. The system is claimed to dispense both with the necessity for opening the road and laying a main cable as well as opening trenches for laying the service wire into each of the cottages. During the past twelve or more years the system has been used very largely for wiring all classes of houses.

Roofing and Wood Preservatives.

The exhibit of Messrs. D. Anderson and Son, Ltd., of Belfast, London, and Manchester, felt and paint manufacturers, consists of a model farm outhouse, with a roof of "Rok," and the timber treated with "Sidol"; also a section of a poultry house showing the application of "Rok" to wooden framework, only backed by wire netting. "Rok" roofing is made from a strong fibre base, saturated and coated with a high-melting-point bitumen, thus rendering it suitable for use in all climates. It is equally adapted for flat, sloping, or curved roofs, and can be applied to wood and concrete surfaces. "Sidol" wood preservative is made in a rich nut-brown colour which brings out the grain of the wood, and is as suitable for staining interior woodwork as it is for protecting outside timber. It is also made in lighter and darker shades of brown, and in green. "Hippo" roofing (also exhibited) is a ready roofing for all temporary buildings. It is claimed to contain no tar, and to require no coating when fixed. Anderson's roofings established their reputation over seventy years ago. In the Crimean War they were used by the War Office to shelter the troops, and have been supplied to Government departments ever since.

Prices of Materials and Labour

The prices of building materials being no longer subject to violent fluctuations, and building trade wages having been stabilized for some time to come, the Editors of THE ARCHITECTS' JOURNAL take the view that there is no longer any need to publish these tables week by week. In future, therefore, they will appear in the first issue of each month. Readers wishing to consult current prices should refer to the issue dated March 1.

Trade and Craft

The Ministry of Pensions Building.

The roof of the huge building for the Ministry of Pensions, Acton, was carried out by Messrs. Diespeker & Co., Ltd., of 57–60 Holborn Viaduct, E.C.1, on their patent Bigspan principle. This company was selected for the speed with which they undertook to carry out the work, an undertaking that was fully realized.

Oil Engines for South Africa

Messrs. Ruston and Hornsby, Ltd., of Lincoln, have secured a contract from the Government of South Africa for thirty-eight heavy oil engines to be supplied to the South African Railways and Harbours Department for driving grain elevators and for electric-lighting purposes in different parts of the country. The order, which is understood to be for approximately 2,500 b.h.p., was secured after very severe competition.

Lincoln War Memorial.

The whole of the Ancaster stone sculpture and carving work in connection with the Lincoln War Memorial has been entrusted to Messrs. M. Tuttell and Son, of Lincoln, fine art sculptors. Mr. M. A. Hall, of Lincoln, is the architect. The memorial, which stands 35 ft. high, is designed in the Early Decorated style, with figure-work and crocketing. All the names of Lincoln's fallen will be inscribed on the memorial.

G.E.C. Floodlights.

Floodlighting is the subject of an extremely interesting illustrated booklet (I.E. 2695) just issued by the General Electric Company, Ltd., of Magnet House, Kingsway, W.C.2. Considerable experimental work has been carried out by the company, who are now able to supply suitable lanterns of robust construction, and with carefully calculated reflector contours, for the illumination of the exteriors of shops and stores, theatres, hoardings, aerodromes, and railway sidings. The company have also issued a new leaflet (L. 2713) giving the revised prices to date of the "Witton" primary cells, listed in section L (2) of the firm's complete catalogue.

The "Glow-worm" Hot-water Boiler.

We have received from Messrs. O. Bruster and De Launoit, of 4 Lloyd's Avenue, London, E.C.3, some interesting particulars of the "Glow-worm" hot-water boiler, which possesses several original and unique features. It is, in fact, claimed to be a most successful substitute for the kitchen range boiler. The "Glow-worm" can be fixed in the kitchen or scullery, and seems to meet the needs of the most critical of housewives. In addition to providing an abundant supply of hot water, the hob forms a hot plate, and can be used for boiling kettles and for many simple cooking operations. The waterways have been specially constructed, and form a baffle. The essential heat gases are used for heating the water, and they are then directed to traverse the hob, the waste heat gases being therefore reduced to a minimum. When the fire door is dropped all the benefits of an open fire are obtained, and the door may then be used as a trivet for heating flat-irons. When the

door is closed the fire is visible through a mica flap. It is understood that the "Glow-worm" is the first boiler of this type which has been designed to offer these facilities to the user. Fitted with a hopper the boiler will burn all night without attention. The "Glow-worm" is a British invention, is manufactured in Great Britain, and the design and the trade mark are registered. A patent has been applied for. Full particulars of the boiler, the consumption of which is low, may be obtained on application to the company, who are also owners of the "Baseco" boiler and radiators.

Automatic Telephony.

Those who have not had the opportunity of following closely the great strides that have been made in the development of automatic telephony should obtain "Notes on Automatic Telephony," an interesting booklet just issued by the Relay Automatic Telephone Company, Ltd., of Marconi House, Strand, W.C.2. The claims of the "Relay" system are manifold, but the features that will chiefly appeal to all telephone users include *speed of operation—clear and secret transmission of speech—impossibility of obtaining wrong numbers.* A further point that will be strongly appreciated is the rapid disconnection and almost instantaneous re-connection to another number if required. This is due to the fact that when the receiver is replaced a further call may be obtained immediately.

Many public bodies and important business concerns in this country are improving their telephone service by installing automatic systems, and the Post Office is now prepared to supply any subscriber on rental the "Relay" automatic system, combining intercommunication between departments and connection to the public exchange service. Such installations are built with exactly similar apparatus to the exchange now being erected for the Post Office at Fleetwood to meet the exacting demands of public service. The Admiralty has the same system in use at various centres, likewise the India Office; and many of the leading banks, insurance companies, shipbuilders, merchants, and manufacturers throughout England have also adopted the "Relay" private automatic telephone system.

Proposed Amalgamation of Reinforced Concrete Firms.

The Considère Construction Co., Ltd., who for the past fourteen years have developed in the British Isles the Considère system of reinforced concrete design, propose pooling resources with the French firm of Pelnard-Considère and Caquot, with a view to increasing the scope of their business and giving their English clients the benefit of the experience which their French colleagues have had during the past few years. Messrs. Pelnard-Considère and Caquot have designed reinforced concrete work to the value of well over £4,000,000 in the past eight years, covering power stations, bridges, industrial and other buildings, etc. The matter is at present in the early stages.

The Heating of Retail Stores.

The current number of "A Thousand and One Uses for Gas" (No. 96) contains some very fine photographs of the interiors of well known stores and drapery establishments, and shows the various types of heating appliances used for making these large airy buildings comfortably warm during the winter months. The magazine also contains some practical advice on the heating of shops, boardrooms and offices and ends by pointing out how the use of smokeless fuel is tending to decrease the number of fogs, which are responsible more than any other form of bad weather for keeping potential customers away from the shops. Copies of this book can be obtained (6d. Post free) from the Secretary to the British Commercial Gas Association, 30 Grosvenor Gardens, S.W.1.

Coming Events

Thursday, March 9.

Society of Architects.—"The Stud Ancient Glass." By Mr. John Knowles.

Friday, March 10.

Royal Technical College Architec Craftsmen's Society, Glasgow.—"Ma ry." By Mr. Matthew J. O'Brien.

Tuesday, March 14.

Sociological Society.—"Art and ciety." By W. T. Constable, Lect Wallace Collection.

Royal Sanitary Institute.—Discus on "Central Heating in Relation Domestic and other Buildings." T opened by Mr. A. H. Barker, B.A., I

Wednesday, March 15.

Industrial League and Counc "Psychology in Industry." By W. Piercy, C.B.E., B.Sc.

Comparative Prices—1914—1921

With regard to the Comparative P —1914–1921, published in our issue January 18, we have received a l from a firm of manufacturers of Ke Cement, who disagree with the given of £8 15s. per ton for that mat in December 1921. In the course of letter the firm state: "At the pre time the price to the builders' mercha or the consumer in full truck load 97s. 1d. per ton delivered King's Cros an equivalent London station, for t loads of four tons and over for the quality Keene's cement. The price the coarse white quality is 102s. 1d that we should consider that a pric £5 15s. per ton, delivered at wharf, w be about right."

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dnesday, March 15, 1922. Vol. LV. No. 1419

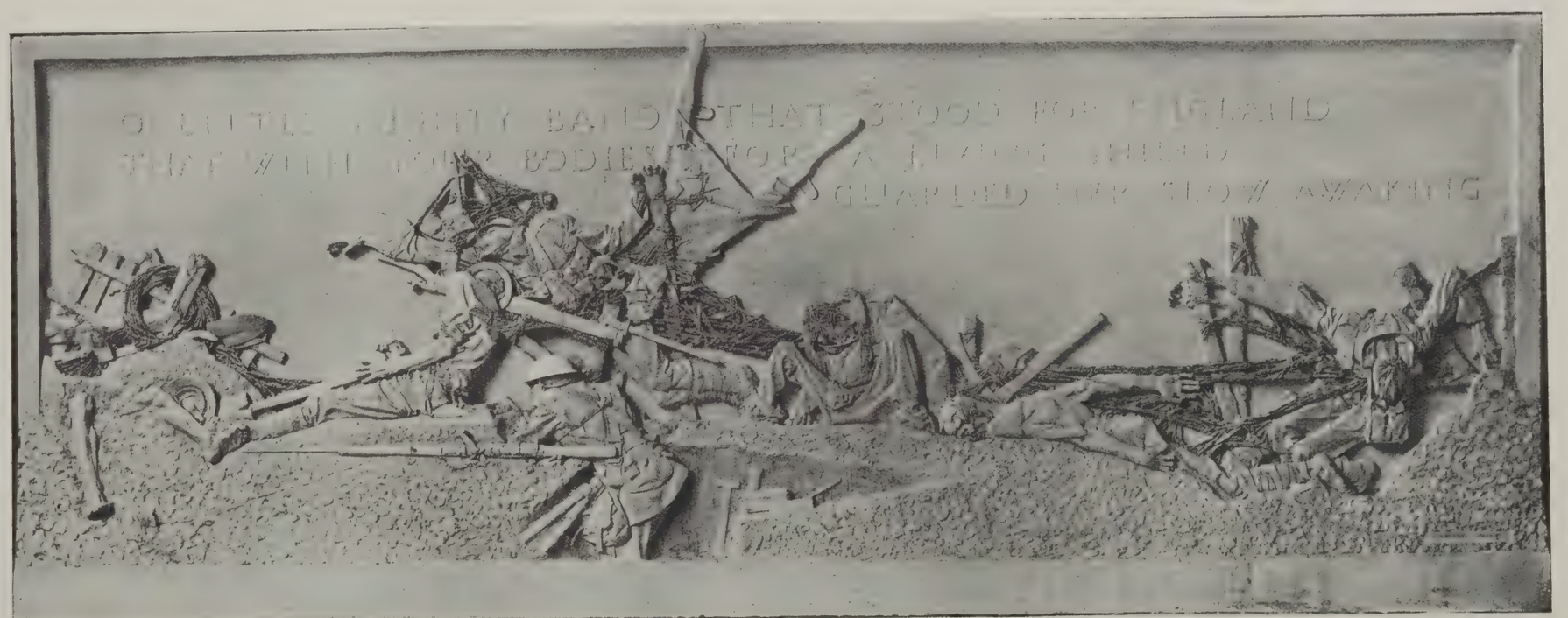
THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

DOOR-KNOCKER, NO. 17 COLLEGE PLACE, BRISTOL.

27-29 Tothill Street, Westminster, S.W.1.

"No-Man's Land." Relief Panel by Charles Sergeant Jagger, M.C. (Rome Scholar, 1914)



Sculptural representations of war are seldom convincing, because either from a lack of knowledge of the true nature of war, or of a reluctance to show it as it really is, sculptors try to conventionalise it; or, if they adopt realism, they attempt to glorify it, and become merely theatrical. Mr. Jagger's realism is convincing because it is merciless. He shows a battlefield as the sickening thing it is—strewn with twisted and withered human wreckage. Realistic though it may be, both in conception and treatment, the panel is yet contrived with consummate art; else it would not be so powerfully affecting. The work has been presented by the Council of the British School at Rome to the Trustees of the National Gallery of British Art.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

dnesday, March 15, 1922 Volume LV. No. 1419

The R.I.B.A. and the Higher Buildings Controversy

BY an overwhelming majority the members of the R.I.B.A., at a meeting on March 6, specially convened to discuss the vexed question of higher buildings, decided against any change in the sting regulations.

'rimarily the height of buildings is not an architectural stion at all, but a town-planning one, and the meeting fortunate in having present Mr. Raymond Unwin and fessor Adshead to give it the right lead in this direction. merica has shown us that there are no æsthetic objec- is against high buildings. In the early days of "sky- cpers" the word was synonymous with ugliness, but liant American architects have changed all that, and e shown the world that they can achieve master- es of beauty when dealing with the highest of buildings. ut America has not shown us how to build even derately high buildings on narrow streets without ously interfering with the amenities of our cities.

t might be possible with the replanning of the streets in don and our larger provincial cities to provide wide nues with plots of ample depth which might reasonably mit a greater height of building than our present ulations allow.

ut even with streets as wide as the most magnificent of Paris boulevards, it is doubtful whether the amenities ur cities would not be better provided for by lower, and higher buildings. Professor Adshead pointed out at the ting that the general trend of city legislation in Europe ing recent years was in the direction of lower and not ier buildings, in the direction of lateral and not vertical ansion.

he uncontrolled expansion of our cities laterally is not out danger. As we have said, the question of the ght of buildings is essentially one of town planning, and uld be considered in relation to the width of streets, the lth, comfort, safety, and æsthetic happiness of the mmunity.

he time is long past when we can think of our city elopment as an heterogeneous collection of isolated dings having no mutual relationship, placed haphazard badly planned and ill-considered streets.

Ve want a finer and wider vision than this, a vision of c pride and civic self-sacrifice, not a vision of brutal petition and selfish exploitation.

n one respect the sense of the meeting was not wholly agonistic to an increased height of buildings on special s. Such sites, for instance, as a newly-constructed ankment on the south side of the river, with adequate vision for light and air in the rear, might provide for a es of buildings which would greatly add to the archi- ural attraction of London.

gain, special sites facing the parks, and in other parts London, might have special buildings of a height and ortance above and beyond their neighbours. One posal before the meeting was that a plan should be pared showing where such sites would be possible; and such a plan prepared under the auspices of, say, the London Society, might prove of immense value to Londoners. For if it could be done—and though the difficulties are immense they are not insurmountable—it might provide for a series of magnificent buildings at specially selected focal points which would give scale and character to the city as a whole

For it must not be forgotten that towns and cities do not stand still, London no more than any other. They grow or decay, and if with a few notable exceptions, such as Kingsway, we have for the last half century or so accustomed ourselves to rebuild our streets on existing lines; this has not always been the case in the past, and it need not always be so in the future.

The seventeenth and eighteenth centuries gave us the London Squares, and the nineteenth-century Regent Street and Portland Place. These were reconstructions in the grand manner involving great problems of alignment and displacement, and it is possible, nay, it is probable, that with our heightened sense of civic consciousness we in the twentieth century may recapture something of the same spirit in the rebuilding of our capital and our great provincial cities.

In London there are whole areas of worn-out buildings which must be rebuilt some time in the near future.

Why, to cite one striking example, should Houndsditch provide an artificial boundary, on one side of which are blocks of palatial city offices let at enormous rents, crowded together with scarce breathing room, whilst a few yards to the east there are miles and miles of mean streets waiting to be demolished to provide sites for newer and better buildings?

If the problem be tackled in a generous and civic spirit there is no reason why higher buildings should not be provided for in suitable situations; but such provision must be for the benefit and spiritual enrichment of the community, and not at the dictation of some successful money-making linen-draper.

The Cardiff Conference and the Welsh Press

Cardiff has "taken occasion by the hand." The second annual provincial conference of the R.I.B.A., to be held in Cardiff on June 8, 9, 10, is quite properly being heralded by introductory articles in the Welsh newspapers. Mr. W. S. Purchon, M.A., A.R.I.B.A., has written one such article in "The Western Mail," and another in "The South Wales News." In each instance the newspaper is fortunate in its contributor, and also the contributor is fortunate in his newspaper, because each of these influential organs was willing to afford so much space to a subject about which most lay editors know little and care less. These two enterprising Welsh editors, in affording hospitality to Mr. Purchon's articles, may assuredly congratulate themselves on giving their readers an intellectual treat; for the history of the R.I.B.A. is, as Mr. Cope Cornford discovered,

well worth the telling, and Mr. Purchon knows how to tell it. Thus two good precedents set by the other learned societies have been—somewhat tardily—followed by the architects, who are lucky to have for their *avant-coureur*—we are sure he will not disdain so honourable a title—the head of Cardiff's Department of Architecture and Civic Design. They have adopted the approved system of holding "movable" conferences; and Mr. Purchon, in describing the functions and achievements of the Institute, has followed a very respectable precedent set by, for instance, so eminent a body as the Royal Society, which can always find members ready and willing to inform the press of its constitution and activities. In rendering architecture this useful service, Mr. Purchon has incidentally set the Institute in a very attractive light, simply by explaining in plain and simple terms what they both are, and by showing clearly why the general public should be keenly interested in them.

Blackfriars and "The Times" Office

As a result of Sir Sidney Lee's chairmanship at Mr. Topham Forrest's lecture at the Birkbeck Institute, the proprietors of "The Times," we make no doubt, will gladly adopt Sir Sidney's suggestion to erect some suitable memorial of the interesting historical fact that the offices of their great newspaper are situated on or very near the site of the Burbage-Shakespeare Theatre, pulled down in 1655. "Playhouse Yard," however, which now leads to "The Times" building, may possibly refer to an earlier building than the Burbage Theatre; for the Black Friars seem to have had a playhouse thereabouts as an appendage to their late thirteenth-century priory. The spot has many other intensely interesting associations. In the fourteenth and fifteenth centuries it was the scene of sundry Privy Councils and Parliaments; and it was also the scene of the famous (or infamous) trial in which Cardinals Campeggio and Wolsey tried the divorce suit brought by Henry VIII against Catherine of Aragon. "The Times" has always done so much to spread knowledge and enlightenment that Sir Sidney Lee's suggestion is certain not to fall on deaf ears, and it is hardly too much to expect the erection in Printing House Square in the near future of a memorial that shall do justice to the rich and varied historical interest of the site.

Cultivating London Pride

Must it for ever be outsiders who show the most interest in London? It was an American scholar—Dr. Wallace—who was the first to pay really serious attention to the site of the Blackfriars Theatre; and now we are indebted for further explorations in that quarter to a scholar who certainly is no foreigner, but who is not a Londoner, save by adoption; and, indeed, it would almost seem that it is London's adopted sons who are most zealous in her governance, as well as showing most curiosity about her history. In the early days of the London County Council, when Lord Rosebery, Mr. McKinnon Wood, Mr. McDougall, and Mr. John Burns, were leading lights—Northern Lights, though not all Scots by birth—on the Council, it was a current saying that London was governed by Scotsmen. And now we have Mr. Topham Forrest, the chief architect to the London County Council, revealing to Londoners, by slow degrees, as if he were breaking the news gently to them, what an intensely interesting city it is in which they live—that it has much more than merely rateable values. Mr. Forrest's investigations respecting the site of Shakespeare's "Globe" Theatre are fresh in the memory; and now he has turned his attention more particularly (but by no means exclusively) to the site of the Blackfriars theatre. Such lectures as that which he delivered a fortnight ago at the Birbeck Institute on "Early London Theatres with which Shakespeare was Associated," serve a far higher purpose than that of beguiling an agreeable hour or so in a lecture room. To induce Londoners to perceive how grand is the city in which they live is to take an important preliminary step in the promotion of good citizenship. And, truth to tell, London pride is as yet but a soot-laden and sickly plant. We feel bound to congratulate Mr. Topham Forrest on the zeal and skill with which he is furthering its growth.

The £5,000,000 Railway Scheme

It is announced by the Parliamentary correspondent of "The Times" that the Government will not oppose the Underground Railway Company's amended proposals for extensions. The original scheme provided for: (1) the widening of the City and South London Railway, and a connection between that railway and the London Electric Railway at Camden Town; (2) the extension northwards from Golders Green to Edgware of the Hampstead and Highgate Railway; and (3) the connection of the Central London Railway and the London and South-Western Railway at Shepherd's Bush. Although this project may not seem at first sight to have much more than an engineering interest, there is no doubt that it will have a considerable effect on building in districts that will be given new or more efficient railway service. At all events, it is to be welcomed as another portent of reviving enterprise.

A Law of Property Bill

Last Wednesday (March 8) there was introduced into the House of Lords by the Lord Chancellor the Law of Property Bill. Its object is "to assimilate and amend the law of real and personal estate, to abolish copyhold and other special tenures, to amend the law relating to commonable lands and to intestacy, and to amend the Wills Act, 1837, the Settled Land Acts, 1882 to 1890, the Conveyancing Acts, 1881 to 1914, the Trustee Act, 1893, and the Land Transfer Acts, 1875 and 1897." Reforms that have been awaited for generations are indicated by every item; but a Bill involving such stupendous issues should not have been sprung upon a moribund Parliament, and its introduction via the House of Lords has the appearance of an old-fashioned essay in the gentle art of political kite-flying.

A Portent of Peace

Congratulations are due, and are hereby tendered to Mr. E. J. Brown on his election as vice-chairman to Lord Burnham, of the Building Trades Employers' Exchange Committee. This would be a signal honour in any circumstances, but it derives additional distinction from the remarkable fact that for this position he was proposed by an operative, and seconded by an operative and elected unanimously. Glad as we are that Mr. E. J. Brown's long and devoted services to the building industry have been thus unequivocally recognized, we are equally gratified to discern in the unanimity with which the election was made so striking an augury of goodwill between employers and employed; for Mr. Brown is well known to the operatives as a doughty champion of the employers' interests. That they have so clearly recognized the possibility that an employer's representative can be trusted to be fair-minded and impartial is not only a personal testimonial to Mr. E. J. Brown, but is a portent of peace and goodwill.

The Rome Prize Controversy

Our enquiry into the question of the Rome Prize has already produced good results, as will be seen by reference to the correspondence pages in this week's issue. The Principals of Liverpool University, of the Department of Architecture and Civic Design, Cardiff Technical College, and of the Department of Architecture, Leeds School of Art, all contribute letters, which should help considerably towards adjusting the difficulties which seem to hinder participation in the Rome Prize, the blue riband of the educational year. Professor Reilly replies to the criticisms of Mr. Robert Atkinson and Professor Beresford Pite which appeared in our last issue, while Mr. W. S. Purchon also

r. Joseph Addison offer some suggestions for the revision the competition conditions which should receive careful nsideration. Obviously something will have to be done the Rome Prize is to receive the support from the schools at, for reasons which the controversy in our pages has at st revealed, is at present withheld. A conference of principals should be called with as little delay as possible in order that the causes of non-participation may be thoroughly investigated. The Rome Faculty will, we are sure, be only too willing to consider any suggestions calculated to promote that keen competition for the Prize which is so eminently to be desired.

The Case for Higher Buildings

By THOS. S. TAIT, A.R.I.B.A.

THE decision of the Art Standing Committee of the R.I.B.A., banning higher buildings in the City of London and higher buildings generally, is certainly not accepted by the more progressive mbers of the profession, as is shown by the proposals of o at least of the leading architects in London to build siness premises to a greater height than 80 ft. to the in cornice.

R.I.B.A.'s Grave Responsibility

The Council of the Institute, in accepting this decision, ume a grave responsibility. Apart altogether from the itations they are thus imposing, from an economic ndpoint, on the development and efficiency of the siness organization of London, æsthetically they are arfing the powers of the architect to erect better and er buildings. Is it the function of an "Art" Committee to ke objections on the ground of the health of the commu- y, when the medical officers have not raised the question? The Committee state that they are impressed with the istic height-limiting laws which have now been passed New York City. They do not seem to be aware that se so-called drastic laws permit of the erection of build- s to one, two, three times the width of the streets, and similar arrangement for the slope of the roofs. When . Donn Barber spoke at the Institute on "American chitecture" he mentioned the fact that opinion was ng against "sky-scrapers" as they were known in nerica, but he qualified it by saying that a thirteen or rteen story building was not a "sky-scraper" in America anywhere else, and that a building of this height was the st economical type of building to erect.

Higher Buildings Necessary

Now, we in this country are not asking to go above this ght, and if the architectural profession as a body wishes retain the respect of the business world, it must be able look upon a building problem not only from the "art" int of view, but also from the point of view of economy d efficiency. The fact of the growth of our cities, etc., increase of the value of land, and the tendency for large anizations to combine, demand that buildings must be ge to accommodate this increase. It is absurd that ildings should be limited to mid-Victorian height, which mps all progress in "art" as well as in "commerce." e ground rent becomes exorbitant, for the tenancy yield the low building property is low, and the resultant ten- ncy is to restrict expenditure on the building by limiting decorative treatment, encouraging thereby the use of ap materials and stock architecture. Surely the ex- ience of American architects in high buildings, together h the fact that it is possible to erect a beautiful high ilding, should be sufficient to blow aside any cobweb ections that we may have to a reasonably high building.

The American Example

Why is it that in America most of the commercial build- s are more handsome than those in this country, and mingly built without any regard to cost, whilst in this ntry architects are always lamenting that they have not enough money to obtain such a monumental result? Is the American client or business man a greater lover of "art," a philanthropist willing to lavish money on a building for the sake of "art"? No, he does it to get a return for his money, and this return is only obtained by getting more value out of the site, which he would not get if he were restricted in height. We, in this country, can never attain this quality of magnificence, because we do not build high enough.

Architectural Possibilities

One of the great objections to the high building is that in a street front only one front or elevation is treated architecturally, the other fronts being allowed to tower into space, constructed of cheap bricks, and covered in many cases with metal fire-escape stairs, advertisements, and electric moving signs. There are, however, high buildings in New York, such as the new Municipal buildings and the Woolworth Building, the latter being more than twice the height of St. Paul's, which certainly have considerable artistic merit, and are worthy to be classed with many of the best European buildings of the period.

The Fire Question

Another objection to high buildings in London is the possibility of the outbreak of fire and the difficulty of dealing with it above 100 ft. The fire-extinguishing appliances of the London Fire Brigade cannot deal with a fire in a building over that height, owing to the low pressure in the water-mains. This deficiency, however, could be overcome by increasing the pressure in the water-mains by means of compressors which can throw water to any height. Moreover, with modern fire-resisting construction, and an efficient system of fire appliances in the way of extinguishers or sprinklers, there is little likelihood of any serious fire occurring. In fact, it is a favourite pastime in America for the occupants of the twenty-fourth floor to watch the fire taking place in the twenty-third floor below —at least, that is an American story.

As a matter of fact, the present position of the 80 ft. line of cornice, with two floors with attic windows above, presents a very serious difficulty to the firemen in attacking the fire or rescuing anyone who might be caught above that line, in that they have to climb out at an angle of 45 deg. to get over the obstacle—a very serious undertaking. The more ideal position of the main cornice would be at the top of the building.

The "Angle of Light"

An important point to remember in dealing with this question of high buildings is that they do not in themselves shut out light and air. Everything is dependent on the angle of light, and this same angle can be retained by increasing the width of the street.

The demand for high buildings becomes greater and greater every year, and London, with all other large cities, must meet the problem. It is for the architect to meet it, not shirk it, and to meet it in the most practical and artistic manner possible, and in doing so he will be fulfilling his duty as a responsible member of the community.

D

Adelaide House: An Example of Higher Buildin

SIR JOHN J. BURNET and PARTNERS, Architects

WHEN the question of Higher Buildings came up for discussion at the R.I.B.A., Mr. Maurice Webb showed diagrams of Paternoster Row and Bouverie Street with hypothetical buildings 120 ft. high on each side of them. Paternoster Row is 20 ft. and Bouverie Street 30 ft. wide, and he suggested that were the height limit of buildings increased it would be possible to make London an inferno of gloom and misery. It is almost needless to say that no one ever meant to erect a building 120 ft. high fronting a street 20 ft. or 30 ft. wide; but nevertheless, as Mr. Webb doubtless intended, these diagrams serve to indicate what is at the root of the whole problem—that the height of a building depends not so much on quantity of feet as upon its relation to the space around it. Leonardo da Vinci, as Sir Aston Webb reminded the R.I.B.A., said "Let the street be as wide as the universal height of its buildings," and even to-day that is probably the last word upon the matter. A building that would be a monster i Bouverie Street is impressive and satisfactory on Londo Bridge, facing the river. Adelaide House, as can be see on the opposite page, is a building of eleven stories—that i one story less than the detestable Queen Anne's Mansion yet, owing to its position in a wide space, it neither obstruc the light nor has any appearance of excessive heigh Professor Adshead pointed out that it had become a reco nized principle of town development that a city shou expand laterally rather than vertically, but a building the height of Adelaide House cannot be convicted vertical expansion. Eleven stories is a reasonab height for a commercial building, always providing obstructs neither the air nor the light. But obvious the great majority of our existing thoroughfares wou have to be either scrapped or entirely revised shou buildings of the same height be required, say, in the hea of the City.

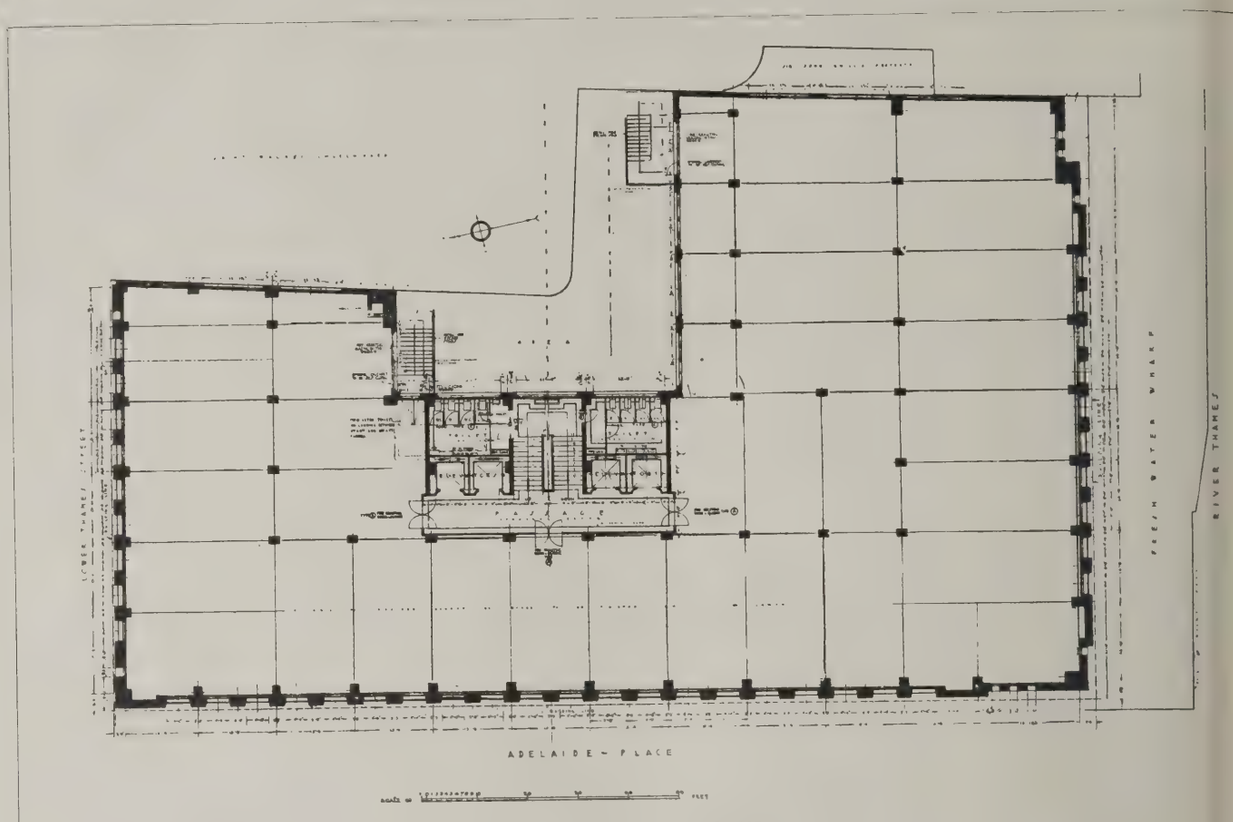
ADELAIDE HOUSE, LONDON BRIDGE: STUDY FOR FIRST DESIGN. SIR JOHN BURNET AND PARTNERS, ARCHITECT

The site of Adelaide House faces Fishmongers' Hall on north end of London Bridge. The sketch on the osite page shows the building as it was first conceived; sequently the design was altered to that below. The ıtage to Adelaide Place is 194 ft. 6 in., to Lower Thames et 85 ft. 6 in., and to the river 120 ft. When erected first six floors will be identical except that the entrance ibule will not be repeated in the other floors, which be left unpartitioned, the partitions to be arranged ıtually when the tenants have taken up their abode. basement and the south half of the Lower Thames et floor will be reserved for purposes of storage, while nection to the wharf and to the basement will be effected ın inclined way and a freight lift.

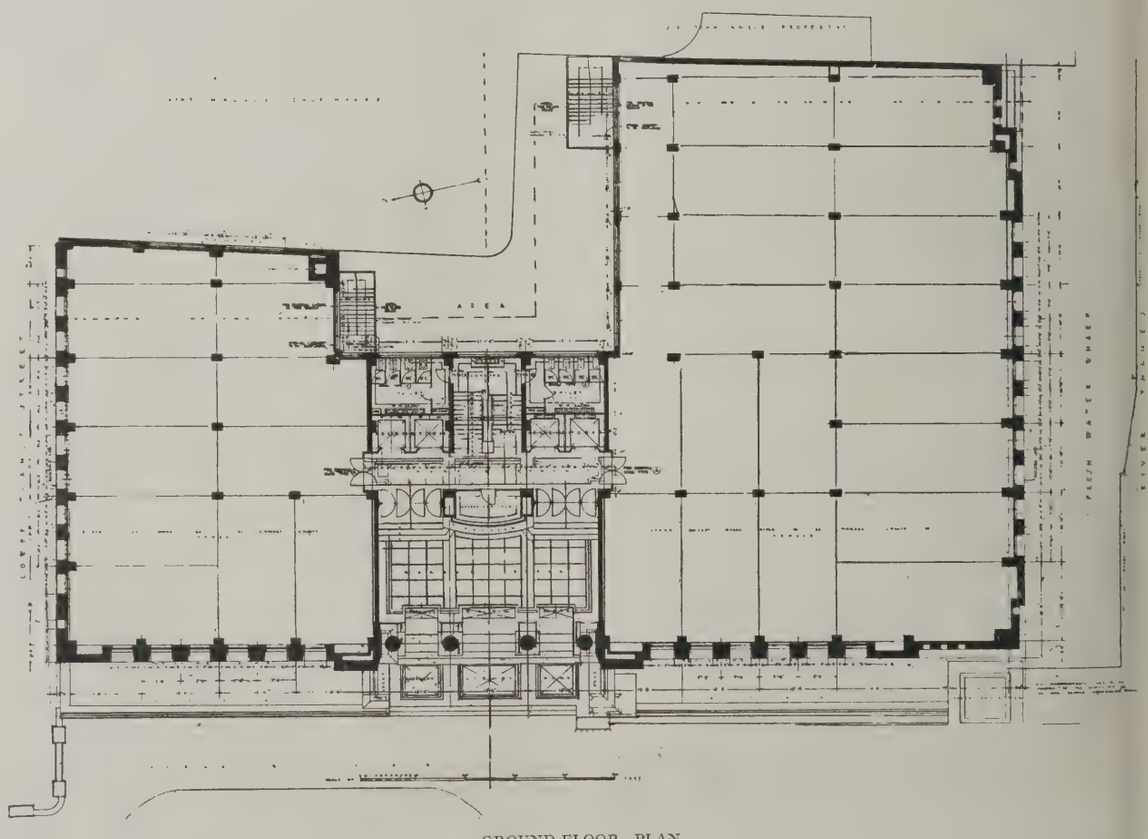
The building will stand upon a granite plinth, being faced lf with Portland stone finished to a rubbed surface; backing to be of Fletton bricks. White glazed bricks be used in the area at the back. Inside, the floors will constructed of hollow slabs, placed between small rein- ed concrete beams, which, running between the main l joists, are designed to carry a safe load of one hundred- ght per foot super on the office floors, and two hundred-weight on the warehouse floors. The steel columns, stanchions, and beams will be covered with 2 in. of fire-resisting material internally, and by 4 in. externally. Internal subsidiary beams will be given a covering of fire-resisting material 1 in. thick. Besides the main concrete stairs running up the centre of the building, there will be two external fire-escape stairways and one metal ladder. A low-pressure hot-water circulating system of heating will be installed, also an electric vacuum cleaning plant, and a mail shoot for the delivery of letters from all parts of the building to the postal room on the sub-ground floor. Fresh-air inlets behind the radiators will provide ventilation.

Sir Douglas Fox and Partners are responsible for the foundations, retaining wall, and wharf, which are executed in reinforced concrete, the retaining wall along Lower Thames Street being 3 ft. thick. The whole site is covered with a 6 in. layer of broken hard material and 6 in. of concrete. Subsoil conditions necessitated the use of pitch-pine piles, driven to the depth of 30 ft. below ordnance datum, or 43 ft. 3 in. below the basement level. The piles support reinforced concrete rafts, about 3 ft. thick; these carry the main steel stanchions that form the skeleton of the building.

ADELAIDE HOUSE, LONDON BRIDGE: FINAL DESIGN. SIR JOHN BURNET AND PARTNERS, ARCHITECTS.



TYPICAL FLOOR PLAN.

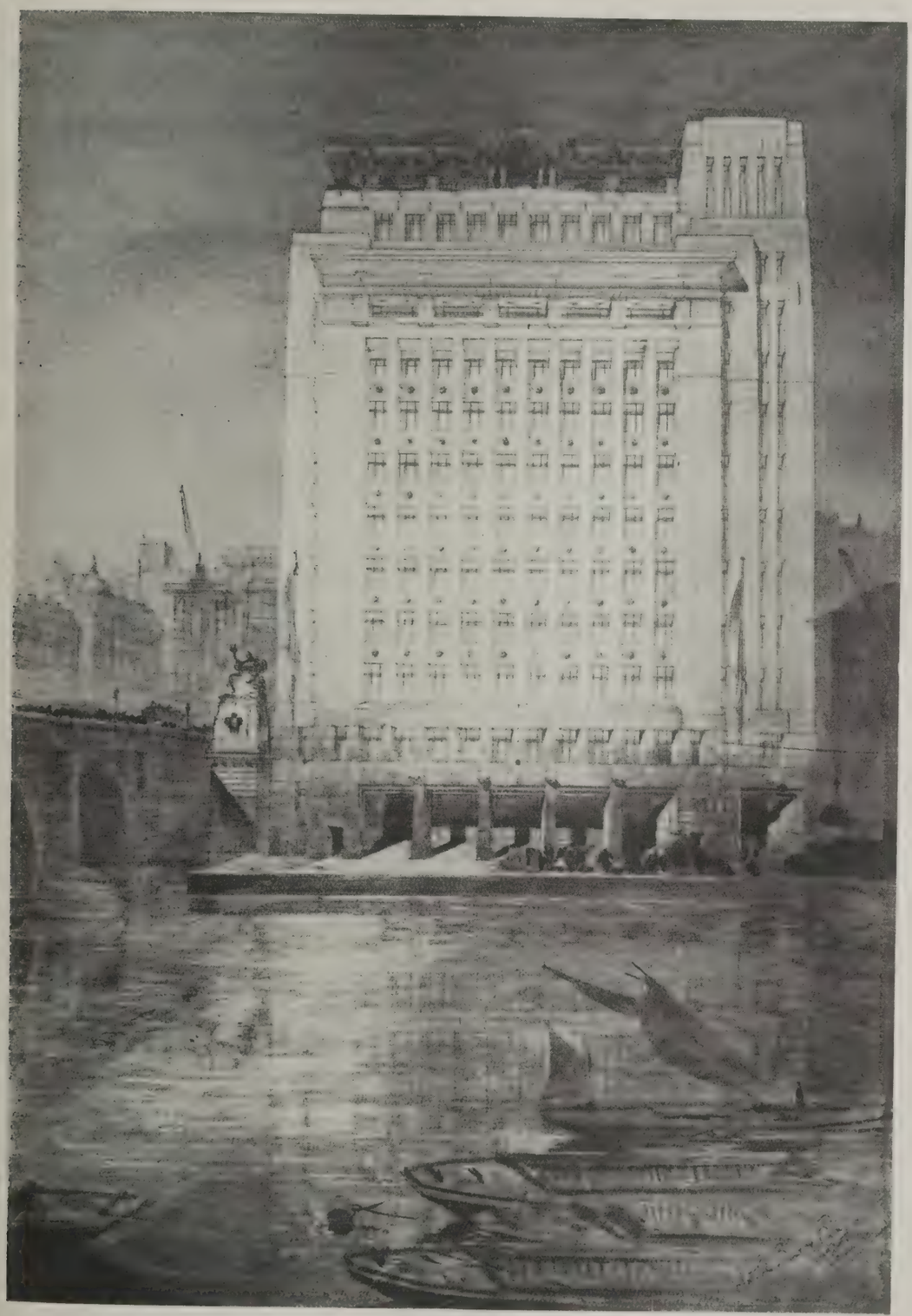


GROUND-FLOOR PLAN.

ADELAIDE HOUSE, LONDON BRIDGE.
SIR JOHN BURNET AND PARTNERS, ARCHITECTS.

Current Architecture. 153.—Adelaide House, London Bridge: Elevation to River

Sir John Burnet and Partners, Architects



Adelaide House when completed will be eleven stories high, and can therefore be classed among the higher buildings of London. It is to be built in Portland stone, and will stand upon a granite plinth. Below is a wharf, and above a series of floors, which are to be let out to tenants. This illustration shows the frontage to the river, which is 120 ft. high to the top of the main cornice.

The Pros and Cons of High Buildings

Mr. Oswald Milne and Mr. Davidge Say a Word More

LENGTHY though was the R.I.B.A. discussion on Higher Buildings, reported on another page, one left the meeting with the feeling that the last word on the subject had not yet been said. Orators ı both sides voiced their opinions, urged their respective uses eloquently and well; but there was, after all, little ıriety of view expressed by the successive speakers.

An overwhelming majority approved the decision of the ɔuncil against any further general increase in the height London buildings, and Sir Aston Webb's plea that the ;itation should be closed once and for all was enthusiastic-ly acclaimed; but, in point of brutal fact, it is not within e power of the R.I.B.A. to utter a final yea or nay in the atter. The public, and especially the commercial com-unity whose interests are most affected, has a will of its vn; and, should it come to pass that the weight of public ɔinion were to bring about a change in the present regula-ɔns, architects might find it a cause of regret that they ere not in the van of the movement.

For the sake, therefore, of the many who must depend on wspaper reports for their impressions of architectural ɔinion, and in the hope, it may be, of provoking further gument, we approached two of the evening's speakers, ıd asked for their views in rather more detail than time .d, on that occasion, permitted them to give.

Mr. Davidge and Mr. Milne had taken opposite sides, they oke towards the end of a long meeting, and were therefore mewhat severely handicapped. Both of them raised, ıt were not able to develop. several deeply interesting ɔints, and these, by the courtesy of the two gentlemen con-rned, we are now able to discuss at greater length.

Mr. Davidge, we find, bases his objections to the proposal ; higher buildings mainly on the "awful warning" ɔorded by New York, in which city, he maintains, they ve been tried and found very distinctly wanting. The al truth is that America wants to go back, would gladly ;ap her skyscrapers, and return to the lower levels which tisfied the modest aspirations of her forebears.

Twenty years ago, said Mr. Davidge, the high building ıze was at its height in America, and buildings were put without any thought of the effect on adjoining properties. ıere was no law of Ancient Lights for the protection of ɛir owners, whose properties were, in many cases, de-ived of light and air and absolutely ruined. A glaring ample of this was the Equitable Building, which on the ɔrtest day blocks out all sunlight from seven-and-a-half ;rounding acres.

The obvious injustice of this evoked at length a chorus of ɔtest from the sufferers in New York, and this culminated the appointment of the Heights of Buildings Commission, ıose report, published in 1913, comprised all the points and against high buildings. There was a strong revul-n of feeling against these erections, resulting in 1916 in ɛ Zoning Ordinances, under which the height of New York ildings is now restricted on the guiding principle that ɛ height of a building should have a definite relation to ɛ width of the street on to which it abuts. It should remembered, moreover, that New York streets are at st 100 ft. wide, and taking one and a half times the lth as the average height allowable, it will be seen that practical limit for New York is about that suggested Mr. Delissa Joseph for the far narrower English streets.

We suggested diffidently that 150 ft. buildings were all ıt had been asked for, and that little harm could come of ;h a moderate increase, but Mr. Davidge would have none this. 150 ft. was but the first claim, he declared, and it uld not satisfy commercial enterprise for long. If that ;e conceded, a further raising of the limit would ensue, l London would be doomed to the miseries from which w York was endeavouring to escape.

Asked whether there could be, in his opinion, any exception to the general ban, Mr. Davidge agreed that in exceptional cases a high building might be permissible, but each site would have to be considered on its individual merits. Buildings such as the Stock Exchange might be raised, but before advancing the question, why did not the City make full use of the space already at its disposal? The City is not half built up to the present limit of 80 ft.

Mr. Milne is exceedingly anxious that the R.I.B.A. should not stand aside at this juncture. He feels, and many will feel with him, that, since there is in certain quarters an unmistakable demand for some relaxation in the present Building Acts, it is for the Institute to take the lead in the matter, and indicate in a general way what line is to be taken, suggesting, perhaps, the broad outlines of a solution.

It was, he said, to say the least of it, short-sighted to pronounce the question finally closed, when it was obviously very much the reverse among the general public, and it was unwise to wait for the Town Planning Institute or the London Society to move in the matter. The R.I.B.A. should set itself to tackle the problem, acting as a benevolent mentor to the layman.

Pointing out the anomalies of the present Act, Mr. Milne said that it was absurd that the same regulations should be in force for the whole of London. Increased accommodation should be obtainable where it was urgently needed, near the exchanges, for instance, but, as the law now stood, no distinction was made between business and residential districts, between narrow thoroughfares and sites abutting on open spaces.

It was true that the L.C.C. had discretionary powers under the present Act, but it was not advisable that these should be in the hands of a body which was subject to change both its personnel and its policy.

The inevitable uncertainty as to what might or what might not be done on a certain site was exceedingly harassing to the business man, and in many cases deterred him from building. Architects are aware that the L.C.C. does its work well and fairly under the existing regulations, but the business man cannot be persuaded that he will not get some extra concession if he brings weight to bear on a committee with discretionary power. That is bad, as it lays the whole question open to a suspicion of wire pulling, which in fact may not be true.

Another result is that the building owner thinks it necessary to find a man to look after his building project who can steer him through all the maze of regulations and who may influence the committee, instead of looking for the architect who can give him the best architecture.

On one point, evidently, there is complete unanimity between the opposing parties. Both Mr. Milne and Mr. Davidge urge the necessity of Zoning Ordinances for London, and in the opinion of the former, any increase in the height of London buildings should be accompanied by an increase in the width of London streets. The adoption of the set-back principle, would, as a matter of fact, tend to produce this.

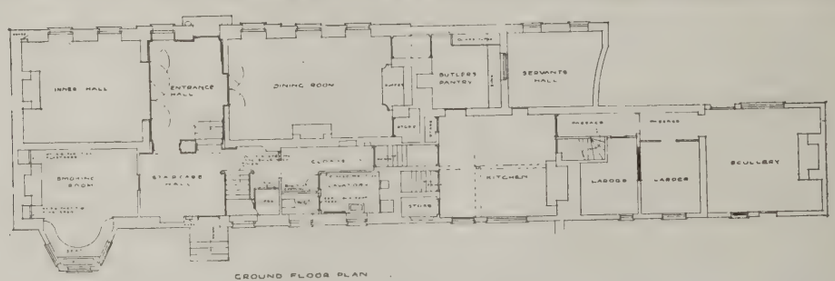
With regard to the fire problem, the L.C.C., as Mr. Milne very justly remarked, was evidently satisfied with the safeguards provided in the higher buildings already permitted by them, so the difficulty might fairly be considered solved. As for the traffic question, no one could say that we were already at the end of possible developments in that direction. Increased requirements had always produced an increased supply, and what was true of the past would be equally true of the future.

Nobody wanted skyscrapers, but undoubted benefits would accrue from a raising of the general level in purely business areas, and fine æsthetic effects would be obtainable; in residential areas and narrow streets even the existing regulations might allow too little air and sunlight. E. N. B.

Mr. Arnold Bennett's House at Thorpe-le-Soken

THAT Mr. Arnold Bennett has an uncommonly fine taste in houses may be inferred from his novels *passim*. He delights to write about them, and to let his imagination play freely, and sometimes even freakishly, around the subject: as when, for instance, "The Card" makes his doorsteps of marble, and lays on the hot water to them so that they can be kept clean with the least possible trouble. Then, again, Mr. Bennett had for a close and beloved friend the late E. A. Rickards, an architect of airily imaginative intellect; and doubtless some of the frequent discussions on architecture into which, it is to be supposed, the two friends taste of the modern public in reading and in playgoing—was not at all likely to leave the house Georgian in it internal arrangements. Without altering its character in the least—one cannot imagine his doing that—he ha installed many modern comforts—central heating, th electric light, three thoroughly up-to-date bathrooms, an so forth. And having made it perfect, he is selling it possibly with the object of finding another house tha is still susceptible of improvement.

Thorpe-le-Soken seems to have been a favourite settle ment for French *émigrés*, and one of them seems to hav bestowed its queer name on Comarques. The Frenc



"COMARQUES," THORPE-LE-SOKEN, THE RESIDENCE OF MR. ARNOLD BENNETT.

occasionally allowed themselves to be betrayed would make fantastical reading. Would that they could be faithfully reported, for the brightening-up of a subject that, let it be humbly confessed, sometimes tends to unsurpassable dullness. That Mr. Bennett in his writings has so persistently enlivened it is possibly due to constant communion with Rickards, who could not be dull if he tried, even in his darkest days of depression.

Mr. Bennett wrote some of his joyous novels and sparkling plays in a house which Rickards remodelled for him. It is a beautiful though somewhat quaint house, rather quaintly named, and situated in a quaintly named town. It is called "Comarques," and is to be found at Thorpe-le-Soken, in Essex. It is a Georgian house of the best type; but Mr. Bennett—a genuine child of his age, or he would not have hit every time with such unerring certainty the Revolution has much to answer for; but it may plead r guilty to Thorpe-le-Soken, a name to make a Frenchm shudder.

Mr. E. A. Rickards was not the first remodeller of t interior; still, built in or about 1720, the house reta most of the characteristic features prevalent at that da The very delightful entrance doorway, for instance, racy of its period. Its small but neat triangular pedime and its circular-headed doorway, flanked by two slen Ionic columns, give character to the frontage and a sw invitation to the interior. Height, breadth, and spacing the windows which pierce the brickwork front (in wh the various floors are marked by stringcourses of rea exquisite proportional depth) are all supremely right, a with the red-tiled roof and its pedimented attics, comb in a total effect that charms at the first glance, and d

CEILING OF INNER HALL.

all however long you gaze at it. The windows, how- though, as we have said, of the right proportions, are as originally designed. They were at first, one may ose, devised with wide sash-bars fixed flush with the work. Very likely it was an Early Victorian architect opined that windows should be recessed, and that gonal panes would give the frontage an air of distinc- It is purely a question of taste, but, personally, we ld prefer plain squares.

oportion is a mark of the building, inside and out; an eye for it makes everything look so inevitably right. When Mr. Bennett, on acquiring the house, called in his friend Mr. E. A. Rickards to remodel it, that architect at once saw that the proportions of the fireplaces were all wrong. He accordingly altered them to what they should be. For example, the smoking-room has a very low ceiling, and Mr. Rickards accordingly provided a very low mantelpiece, reflecting or echoing exactly the general proportions of the room, giving it a dignity that it had previously lacked, yet making it cosy withal. On such a mantelpiece an American would plant his heels without any feeling of strain or much appearance of singularity.

It will not be complained by the judicious that there are anachronisms. What an if they be? They are by so much the more truthful. They do not pretend that they belong to a date long anterior to that on which their maker was born, and they do not lack the spirit that a man may infuse into them only if he is creating and not copying, or, rather, if he is working with the familiar genius of his own hour at his elbow, and not trying to follow the antic gestures of some dim spook from a bygone day. Within recent years there has been—has there not?—a complete *volte-face* in this matter. The old rule is superseded, that is to say, the Early Victorian rule, for the builders of our cathedrals, for instance, strongly asserted the day in which they lived, so that you shall trace sometimes three or four different centuries, or more, in one building.

Even the "period" fetish is often flouted. The demand for "self-determination" is not confined to political boundaries. It affects the bounds of time, for the simple reason that a man works best when he is not fettered by

STAIRCASE HALL, AS REMODELLED BY THE LATE E. A. RICKARDS.

the conventions of a bygone age, but may freely express the spirit that has come to him from his own.

It is in that spirit, we think, that Rickards always worked. He always demanded freedom, and no doubt Mr. Bennett rejoiced to give it him in the remodelling of these interiors. Hence they are so obviously the work of a creative artist, and not of a mere copyist. Some of the ceilings in the house must have delighted Rickards. One might easily imagine that possibly they were made for the wealthy *émigré* who first inhabited the house, and perhaps caused it to be built; but they appear to be of much later date. The design of the house itself is finely Georgian; but some of the ceilings are fraught with French grace a elegance. In one of them vine leaves and grapes grow c from a circle of reeded moulding; with this design t rest of the decoration contemporary with it (that is to s dating from about the last quarter of the eighteenth c ture) harmonizes very gracefully and appropriately.

It is thought that all the walls of the rooms were origina lined with "Wren-like" panelling, some traces of which a still to be found in the cloakroom. The wonder is th Mr. Arnold Bennett can bring himself to forsake so beauti a house, wherein, moreover, much of his most famous litera work has been done.

DINING ROOM.

INNER HALL.

"COMARQUES," THORPE-LE-SOKEN, THE RESIDENCE OF MR. ARNOLD BENNETT.

Correspondence

The British Prix de Rome Controversy

o the Editors of THE ARCHITECTS' JOURNAL.

s,—After the complimentary re-es to the work of the students of Liverpool School in your leading e of last week, there may not seem eason why I should join in the cor-ndence on the subject of the Rome arships in Architecture which I am o see you have initiated.

ere are, however, one or two points l by my friends Mr. Robert Atkinson Professor Beresford Pite to which I d like to refer. Mr. Atkinson sug- and indeed it is his main point, he work required in the competition l too onerous, and that that was the reason why only one A.A. student dless to say much to my regret—leted a set of drawings in the recent etition. I think, perhaps, Mr. son forgets the great reduction in amount of work required from nts which the Faculty of Architec-of the School at Rome has brought . Instead of, at the shortest, four rs' work, the maximum time now ed to be spent on the drawings is weeks; and instead of drawings of ited area, with every inducement d in big ones, the Faculty has now d the size to the equivalent of three e-elephant sheets. The production se three sheets cannot be considered cessive labour in draughtsmanship e honour of being a Finalist in our er scholarship competition. It is less work than has been required past for the Soane or Tite prize. work in the final round is to be d in the same way—to ten weeks in of time and to three antiquarian in point of drawings.

nust say, however, I have more ithy with Mr. Atkinson's other that even this amount of work, if in the midst of a school course, be a serious interruption to that . But is it necessary that the whole work, even with school candidates, l be done in the midst of a school ? I think not. The candidates a school for such a competition , and ought to be, the senior nts. That is to say, those in at least fourth or fifth year. Now, the and fifth years' work in all the s is arranged as part-time work; s to say, the student attends the for a solid six months, and then into an office for the other six ns. The time-table arranged by the Faculty allows for the more ns part of the work—the final —to be done between March and that is to say, in the time when the it is free from his school work. The nterruption to school studies caused ore by the present scheme is the 's design at the preliminary stage. ctice it means that for one month udent, as regards his studio work, receive any criticism or help from chers. He can attend his ordinary courses or even take a weekly design, as did some of the Liverpool ates. (It must be remembered nese were not all in the school; one was an old student now in Sir Edwin Lutyens's office.) I do not think, therefore, the interruption to study is really as serious as Mr. Atkinson suggests, while the enthusiasm engendered in the rest of the school is invaluable.

Mr. Atkinson's third point is as regards the composition of the jury, but I imagine that can only have applied, if at all, to the juries of other years, and not to the present one. I think it would be very difficult to choose from the whole profession a better jury than Sir Aston Webb, Sir John Burnet, and Mr. G. Gilbert Scott. Such a jury seems to me to combine experience, enthusiasm, and ability in exactly the right proportions.

With Professor Beresford Pite's suggestion, however, that the scholarship should be awarded on a set of working drawings plus a perspective, I am afraid I have no sympathy. The object of a competition like that for the Rome Scholarships is obviously to enable the jury to select the young man with the finest architectural imagination. He is the man who will benefit most by the scholarship. To suggest selecting such a man by the minutiæ of working drawings, as that term is generally understood, is indeed a strange idea. On the other hand it is, of course, the duty of the jury to make sure that the student's imagination has a proper architectural turn, and that the building he has conceived is constructable. His drawings should be such, and the subject set should be such, that his imagination has full play. At the same time the resulting drawings should be workable drawings while doing full justice to his ideas. Perhaps by "working drawings" all Professor Pite means is "workable drawings." Let us hope so, though I rather fear he is thinking of plumbing and ferro-concrete. His reference to Professor Lethaby is not a little ominous in that regard.

The suggestions that the scholarship is not valuable enough at £250 a year, in spite of several Rome scholars having married on it, that the three years in Rome are too long an addition to already long-drawn-out school courses, would both be met and more than met if our Government would do for the returned scholars something similar to what the French Government does for theirs. Until it does, however, it is the duty of the leaders of the profession, and particularly of the members of the Faculty, to promote the interests of its scholars, and if we may judge from opportunities given to those who have already returned this is a duty they well recognize.

The architectural press, too, can do a great deal by giving full publicity to the scholarship, as you are doing at the present time. Its criticism, however, of the work submitted should be serious, sensible, and worthy of the occasion, and not the flippant jests of a member of the staff of one school, unrepresented in the final, on the work of the schools which this time have been more successful.

Yours truly,

C. H. REILLY.

School of Architecture, University of Liverpool.

P.S.—In reply to Professor Richardson's letter, in which he says the Prix de Rome should be reserved for senior students such as those who have passed their final examination for their A.R.I.B.A., I may say that five out of the eight successful Liverpool students have already reached that stage, although still fourth or fifth year students in the Liverpool School. I am very glad, however, to see that the London University School intends in future to encourage its senior students to compete.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In answer to your enquiry with reference to the Prix de Rome, I wish first to offer my congratulations to the Liverpool School and its students on their fine performance.

The school in Cardiff is a new one, having been established under two years, and therefore none of my students was sufficiently advanced to compete. It is, however, our hope that in a few years' time some of our fourth and fifth year students will enter.

I think it must be realized that the ambitions of *some* students tend in other directions; in order, however, to ensure a more strenuous competition, two things would appear to be necessary :—

1. That the competition be held during the school vacation.

2. That some general agreement be reached by those responsible for the teaching of architecture in this country as to the nature of the test, and of the adjudication.

With regard to the second point, the discussion you have started is helpful. Fortunately, while there is much in common in the methods of the various schools, they are not all being run on rigidly similar lines, and for this reason a broadening of the representation on the Faculty would seem to be a wise step to take.

Yours truly,

W. S. PURCHON.

Department of Architecture and Civic Design, The Technical College, Cardiff.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The Rome Scholarship is, by its very nature, open only to students who have completed, or almost completed, their studies at a school of architecture, and attained a high standard of perfection in the various branches of their art. Naturally this limits the number of entrants.

The results of the last two competitions have not inspired confidence as to the architectural value of such labour. Rather they appear to be feats of impressionist draughtsmanship than works of real architectural quality.

I am in accord with Professor Beresford Pite, that the constructional problems (which have been the chief elements in all great historic buildings) should be solved.

Nevertheless, I do not think working drawings are an essential, but rather that

the construction be definitely considered in conjunction with architectural form.

The chief complaint of the students seems to be that the preliminary competition involves too much time and effort. I am certainly of the opinion that the preliminary test could be greatly modified with equally good results.

The undernoted are points in regard to the conduct of the scholarship upon which enlightenment would be useful to students and educational bodies alike.

1. The names of the gentlemen composing the jury assessing the competitions.

2. Does this same jury arrange the problems of the competition ?

I would suggest that the matter be gone into fully by a representative committee of the architectural schools, who should approach the Faculty with a view to modifying the conditions.

Yours faithfully,

JOSEPH ADDISON.
Head, Dept. of Architecture,
Leeds School of Art.

A Defence of London Schools

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In last week's leading article the writer seems to conclude, from the number of entries and successes in the Rome Prize by students of Liverpool University, that architecture, as the Mistress Art, abides in Liverpool only.

If success in students' competitions is a criterion of vitality in architectural study, it is only fair that London should not be completely overlooked.

The following is a list of some of the most important school prizes and awards for 1921–1922 :—

Rome Scholarship in Architecture, 1921.—R. Pierce, Architectural Association Atelier, London.

Jarvis Scholarship, 1921.—E. W. Armstrong, Architectural Association, London.

Tite Prize, 1921.—G. Holt, Architectural Association, London.

Victory Scholarship, 1921.—J. H. White, Architectural Association and 1st Atelier, London.

Victory Scholarship, 1921.—B. Fraser (*ex aequo* J. H. White), 1st Atelier, London.

Soane Medallion, 1922.—A. J. Brown, Architectural Association, London.

Owen Jones, 1922.—W. J. Knight, Royal College of Arts, London.

Grissell, 1922.—Not awarded.

Saxon Snell, 1922.—Not awarded.

R.A. Gold Medal, 1922.—Cyril Farey, Architectural Association and Royal Academy, London.

It will be seen from the above that London practically swept the board, and therefore during 1921, anyway, the Mistress Art must have been living in London. Surely she does not change her address from year to year according to the number of entries for the Rome Prize from any particular city or school ?

As a matter of fact everyone knows that the study of architecture is very much alive in many centres besides Liverpool and London.

Yours faithfully,

HOWARD ROBERTSON.
Principal.
The Architectural Association.

Lord Knutsford on Architects and Architecture

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—May I leave my hospital "last," and even City Churches ? May I resist the temptation to reply to Mr. Keen, whose sentimental soul is so moved by churches which cannot be seen, but only felt ? May I do this to beg first of ship architects—that they will devote some of their skill to the bedrooms, as I prefer to call them, on the big ships ? It appears to me that too much attention is turned on to palm courts, ballrooms, squash courts, and so on, at the expense of the sleeping accommodation. Is it not monstrous that unless one is a millionaire one has to sleep in what is little better than a cupboard, and share even that with some "beastly stranger" ?

Next, may I beg and pray architects of houses not to go on making two mistakes I see over and over again in houses ? The first is that bedrooms are built over the kitchen, and the second is that the kitchen chimney is taken up a bedroom wall. I took one year in London a house the whole side of which, including the dining-room, was made stuffy by this kitchen chimney heating the wall. My own home has both these blots, and yet was built by quite one of the first architects—now dead.

KNUTSFORD.

"The Commercial Ideal"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I am not a shopkeeper, but as a man who makes and sells things of use to the community I could not help feeling a strong resentment at Mr. Creswell's unhappy attempt to discourage the pursuit of the materialistic to the unnecessary disparagement of the business man. Although Mr. Creswell disclaims any attack on commerce, his very title and his remarks concerning the indignity and unworthiness of Commerce to receive anything from Art are such as to rouse strong feelings in the minds of all self-respecting business men.

Society is now such a complex affair that we cannot all be lawyers or doctors or architects. Some of us must perform those necessary services of manufacturing, selling, or distributing ; but because, either from circumstances or natural inclination, we engage in trade, it does not necessarily follow that we lose dignity thereby, or that we need be obsessed of the materialistic ideal. After all, let us put aside all cant and humbug, and admit that the majority of architects adopt the profession to earn a living, as the majority of business men go into trade for the same reason. The difference lies in the fact that the architect sells his services (and does not publicly promote his sales), while the business man sells his wares (and endeavours to obtain the widest publicity for them). Taken as a class, the average business man of the present day is every bit as cultured as the architect. He is refined in mind and soul, and possesses a lively sense of appreciation of the beautiful and true.

Is it not about time that the architect stepped off his false pedestal an deavoured to learn that there can natural dignity in business equal in respect to the dignity of the profess After all, it is the pursuit of trade a creation and distribution of wealth have provided Art with its opportu to thrive and develop. Until a change takes place in human nature will always be a certain proportion o in all spheres of life whose only ai materialistic one, and in my opinio percentage of black sheep will be to be quite as high among the profe as among the business men.

Curiously enough, the most avari self-seeking man I know is a profes man (not an architect), and the n admire most for the sterling qualit absolute honesty, integrity, refine and kindliness is one of the much de business men.

If we can have more sincerity b the professions and trade, and a co-operation between them, we sh think, advance nearer to the human

The above was written before I sa letters in your last issue.

"A TRADE

Unemployment and t Professional Assistan

The first of a series of open me dealing with the present economic and the architectural and surveying fessions was held at Caxton Hall, minster, on March 2, the chief fe being an address by Mr. William C. General Secretary of the National Fe tion of Professional, Technical, Ad trative, and Supervisory Workers "Unemployment and the Profes Assistant."

The president of the Union, Mr. Penty, occupied the chair, and i opening remarks reminded the aud that March 4 was the third annive of the foundation of the Union. D this time it had constantly endeav to fight the battle of the assistants allied professions, and the holdi these meetings was witness to the that it was the only body which, in sp almost insuperable difficulties, was t to seek a solution of the problems quent upon the present crisis.

Mr. Keay, in the course of his ad said that on the industrial side it wa possible by means of an organiz such as had been established b Architects' and Surveyors' Assistants the wishes of these workers could be known. Architects and surveyors gain much from the experience of professions in the necessity for lim entrance into the profession, and the trol and thorough training of appren

Mr. Keay described the results deputation appointed to meet repres tives of the Cabinet Unemployment mittee at the Ministry of Labour o subject of unemployment. The sentations were sympathetically sidered by the officials at the Min Owing to the high standard of re ments of professional workers and necessary commitments, the effec unemployment were felt even severely than in the case of less speci workers. The difficulties of re-em ment were correspondingly gr

inted out the necessity for an stabilization of values and ces- of wages reduction, so that night be put in hand without the further depreciation. The present ng spirit in commerce and indus- uld require to be replaced by a con- ve programme. He pointed out cessity for the establishment of im scales of salary for the profes- worker. In this the support of all chitectural and surveying profes- through their representative ation, was essential. The archi- l profession was especially hard the present depression.

R. G. Strachan, in proposing a vote ks to Mr. Keay, reviewed the work ion had done in regard to the posi- the professional assistant under nemployment Insurance Bill now law, and also since then in setting heme under the Act for assistants llied professions, He also referred action of the Union in appealing Ministry of Labour and to local ities throughout the country, on of the unemployed architectural and surveying assistants. He regretted the Union was not yet strong enough to be effective, and he appealed to all eligible to come forward for membership and so to help in the solution of this problem.

Mr. Chas. McLachlan seconded the vote of thanks. He denounced the Geddes Report as being largely false economy. Large numbers of manual and non-manual workers would be taken off useful work, and become dependent on the Unemployment Insurance Act and local relief. In the present state of widespread unemployment this was not the time to put large numbers of other workers on the labour market. He felt that a real scheme of relief work would have been to encourage unemployed workers on to the land. Ultimately we should have to come to this, for many of our industrial markets had been lost to us for good. We should have to become an agricultural people, and therein possibly lay some hope for the architect in that he would be called upon to rebuild our villages.

The Chairman, in putting the vote of thanks, said he largely agreed with the last speaker. He felt that the decay of agriculture and the introduction of machinery on a large scale were the chief causes of the present crisis. Machinery had abolished handicraft and had dispersed large numbers of workers. In its early days the development of railways had absorbed a large amount of this labour. Latterly we had amassed wealth by production on a large scale and by selling to foreign markets. Now these countries all over the world were producing for themselves. Whatever optimists might say, he regarded the present industrial position as hopeless.

It was intimated that the second meeting of the series would be held on Thursday, March 30, at Caxton Hall, at 6.30 p.m. On that occasion the subject of discussion would be "Overcrowding of the Architectural and Surveying Professions," to be introduced by Major Harry Barnes, M.P., F.R.I.B.A., F.S.I., and under the chairmanship of Mr. H. D. Funnell, F.S.I. The Executive Council of the A.S.A.P.U. heartily invite all interested to attend and contribute to the discussion.

Little Things That Matter. VIII—Tiles

By EDWIN GUNN, A.R.I.B.A.

IDE the ordinary uses of plain les for weatherings, oversailings, id the like, there are many minor ns in building where they provide dy means of fabricating things nd readily from material at hand. ks, for example, are made quite torily by filling up a space 9 in. by 9 in. by 6 in. with plain tiles and tile alternately, and these present eat advantage in cavity-walling ey are deep enough to penetrate the cavity as shown in Fig. 29. er to exclude birds and mice it is l that the inner side of the grat- ould be covered either with sh rabbit wire, or expanded metal

e-springers formed by corbelling plain tiles sufficiently to provide a top to the projecting eaves are suitable use in connection with ork—a plastered or rough-cast g may have such details more v formed in concrete or flagstones. tail, as in the case of most others trades overlap, wants careful ng. I have found a strong dis- on the part of workmen to allow ia to project in front of the corbel, which should, of course, stand far enough forward to stop both the fascia and the soffit. The most pleasant effect is produced when the oversailing takes place by increasing graduations, as shown in Fig. 30, and at such a level as to attain its maximum projection in line with the bottom edge of the fascia. When the corbel jumps forward in a solid block, or in a series of even steps, it has a relatively clumsy look. A temporary strut below the overhang is desirable if the projection exceeds, say, 6 in.

The doorhead in a house, which is intended to be purely of brick, usually presents some difficulty — particularly when a recessed porch is desired. The way out is to form a flat arch of pantiles, with a keyblock either of stone or plain tiles. This forms a naturally "joggled" arch, and is perfectly sound. Old hand-made pantiles should be used, and owing to both right and left hand being required they need to be cut so as to get rid of the nib and clipped angle. This can be done without much trouble by using an old worn-out backsaw, afterwards softening off the raw edges with a rasp. The skew-backs must be hidden by projecting pilasters, and a brick and tile cornice completes quite a pleasant little practical joke. See Fig. 31.

When did the habit of laying quarry-paving diagonally arise? Presumably at some time during the Gothic revival, when black and red or buff and red were used in alternating checker patterns. Fortunately paving is now again usually laid square. The colour effect is much improved if the joints are not eliminated or reduced to the minimum; ¼ in. or ½ in. joints permit a slight irregularity in size and shape to be overcome, and give an interesting surface. A skirting one course high of similar quarries is a useful finish against plastered or distempered walls, preserving the finish when floor washing or sweeping takes place.

Similar considerations with regard to jointing apply equally to wall tiling, which gains immensely in appearance when the joints are not as fine as human skill can make them, and not "pointed in Parian tinted to match tiles." Imperfectly white tiles set square checkerwise (unbonded) with a ¼ in. to ½ in. joint (according to size of tiles from 3 in. to 8 in.) avoid all that distressingly mechanical effect suggestive of underground conveniences which wall tiling commonly has.

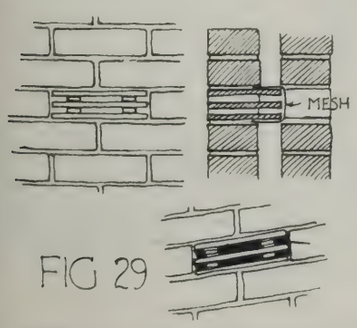


FIG 29

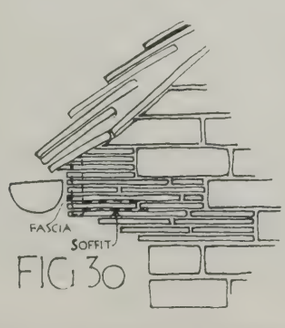


FIG 30

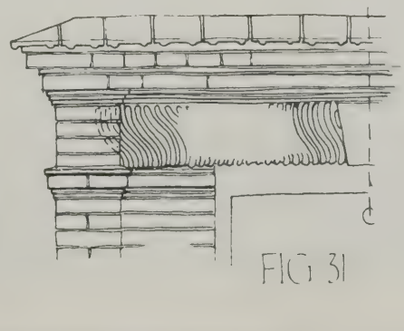


FIG 31

New Bank Premises at Swansea

The accompanying photographic and other illustrations show premises which have recently been reconstructed in Wind Street, Swansea, for the National Bank, Ltd., from the designs of Messrs. C. S. Thomas and Herbert Jones, FF.S.Arc., Swansea. The premises are situated in the principal business street of the town, next to the General Post Office. The architects were considerably hampered by the conditions found. The banking premises occupy the whole of the ground floor of an existing building, and the planning arrangements were governed by the position of a staircase to the offices on the first and second floors, which practically cut the site into two halves. The first floor could not be raised, consequently the head-room is rather lower than was altogether desirable.

Portland Stone has been used for the front, with bronze window frames and wrought-iron railings. The aim of the architects has been to obtain a well-lighted banking hall, and to this end the windows of the front and return elevations extend practically the full length of the respective sides.

The interiors of the banking hall, manager's room, and waiting rooms are panelled in walnut; the ceilings are in modelled plaster, and the floor of the banking hall is paved with marble tiles. The stone carving to the front, the wood carving in the manager's room, and the models for the plaster ceilings, have been executed to the architects' desig

Messrs. Haughton Bros., Worcester

The general contractors for the

(*Continued on page* 410.)

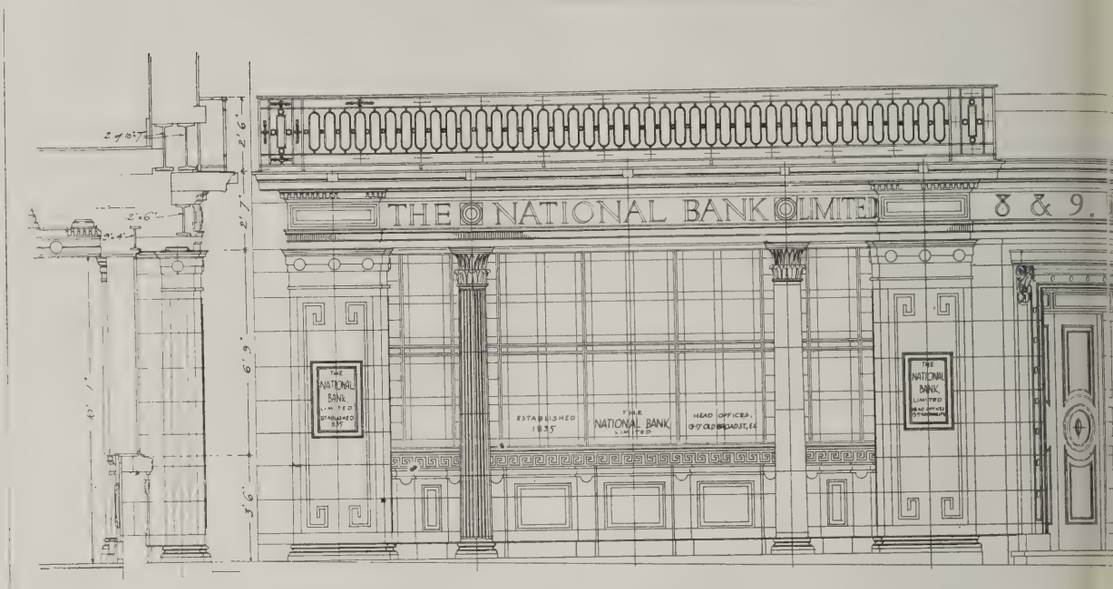
MANAGER'S ROOM.

PREMISES OF THE NATIONAL BANK, SWANSEA: BANKING HALL

C. S. THOMAS AND HERBERT JONES, FF.S.Arc., ARCHITECTS.

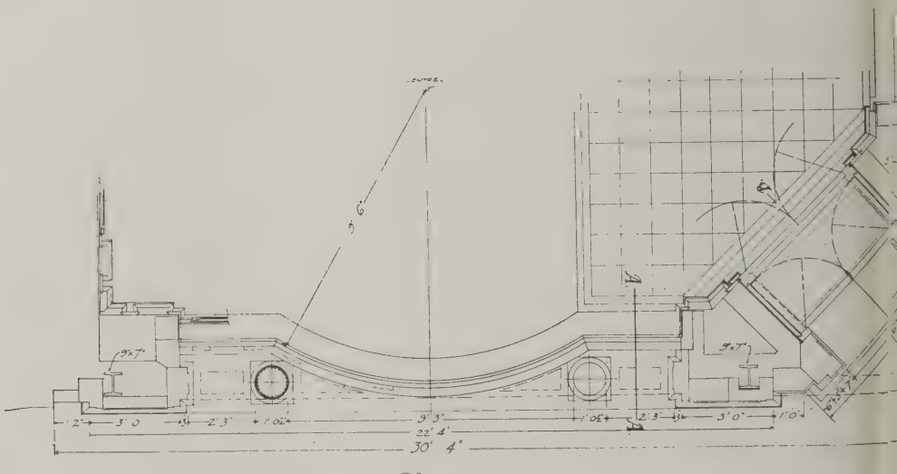
Architects' Working Drawings. 53.—Premises of t

C. S. Thomas and H



·Section at A-A.·

·Detailed Elevation.·
· See also full size Details ·

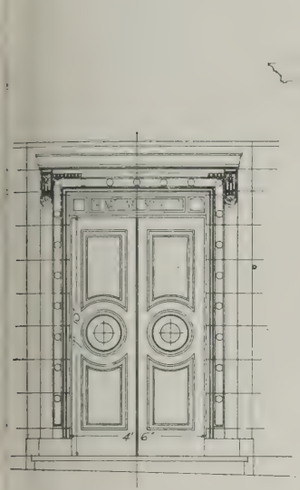


·Plan·

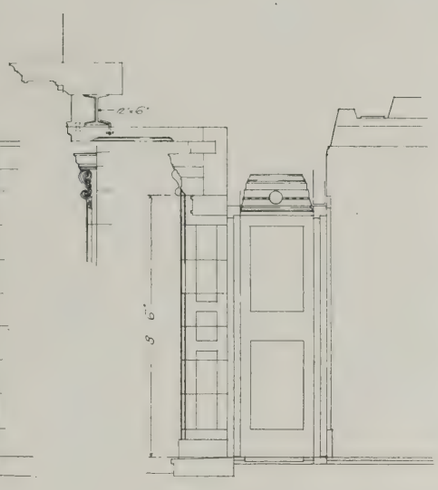
In designing these premises, the primary aim of the architects was to obtain a well-lighted banking-hall, and t
Portland stone is used for the front, with bronze window frames and wrought-iron railings. The int

inal Bank, Swansea: Elevation, Plan, Sections, etc.

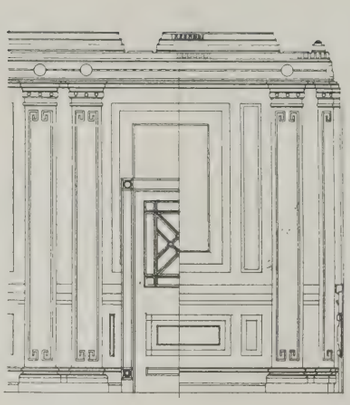
l, FF.S.Arc., Architects



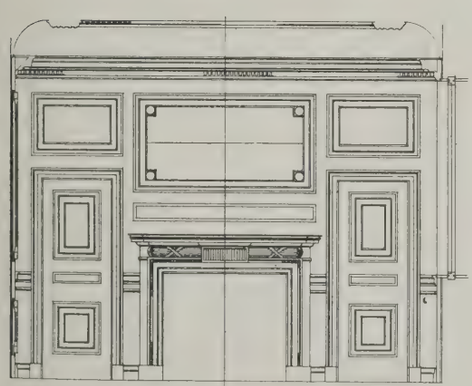
Main Entrance.



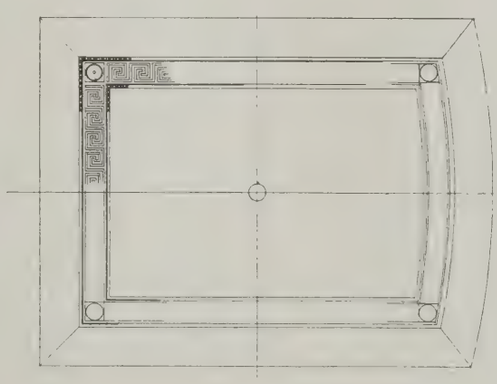
Section at B-B.



Detail of Panelling.

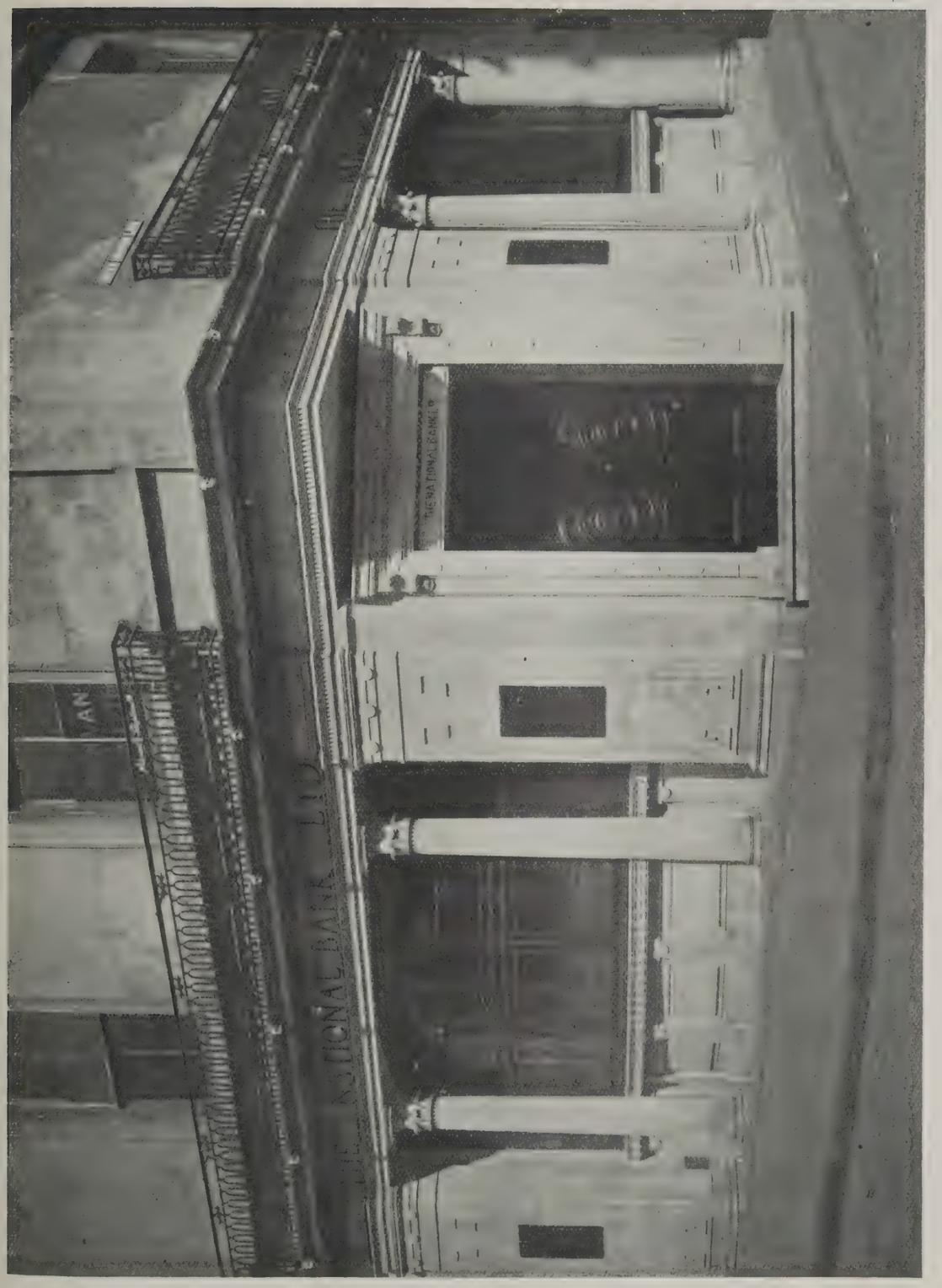


Panelling, &c to Manager's Room.



Ceiling to Manager's Room.

front and return elevations have therefore been made to extend practically the full width of the respective sides.
f walnut, ceilings are of modelled plaster, and the floor of the banking-hall is paved with marble tiles.



NEW PREMISES OF THE NATIONAL BANK, LTD., SWANSEA. C. S. THOMAS AND HERBERT JONES, FF.S.Ars., ARCHITECTS.

(*Continued from page* 404)
were Messrs. Lloyd Bros., Swansea, who also carried out in their workshops all the wood panelling and counter fixtures. The sub-contractors were as follows: The South Wales Structural Engineering Co., Ltd., Swansea (structural steelwork); The Marble Mosaic Co., Ltd., Bristol (marble work); B. Ward & Co., Cardiff (fireproof stairs); E. Williams & Co., Swansea (bronze windows and ironmongery); E. Nener and Sons, Swansea (heating and lighting); Furneaux and Thomas, Swansea (telephones); The Bath and Portland Stone Firms, Ltd., Bath (Portland stone); The Luxfer Co., Ltd. London (steel windows); The South Wales Engineering Supply Co. (electric light fittings); Marryat and Scott, Ltd., London (lift).

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Discharge of Ex-Service Men.

Sir A. Mond informed Sir A. Sprot that there were 302 ex-Service men under notice of discharge in the Ministry of Health, due to curtailment of work and consequent reduction in staff. The recommendations in the Lytton Report had been carried out.

Staff of Ministry of Health.

Sir J. Gilmour, answering Lord Wolmer, said that the administrative, professional, and clerical staff employed in this department in 1913 and at the end of 1921 numbered 674 and 1,920 respectively. The cost of the staff in 1913 was £149,660, while the estimated cost of the staff for the current financial year was £665,050; £80,500 of this sum being recoverable from local authorities in respect of services rendered by the department in connection with housing schemes and other services.

Men Employed on State Housing.

Sir A. Mond informed Mr. T. Thomson that the total numbers of men employed on housing schemes of local authorities and public utility societies were as follows: October 1, 138,334; November 1, 134,200; December 1, 125,344; January 1, 116,599; February 1, 101,235. These figures were exclusive of the men employed on houses being built with the aid of the private builders' subsidy. During the winter months it was to be expected that the volume of employment in the building trade would ordinarily be reduced. He was at present sanctioning more houses in various localities where it could be shown that the necessity existed and where prices were reasonable. He was glad to find that local authorities were assisting him very much in the policy of trying to get prices reduced by not asking for any large number of houses to be built.

Sale of State-Aided Houses.

Answering further questions, the Minister said that he had always encouraged the sale of houses by local authorities, and he was considering what further steps in this direction were practicable.

Sir R. Horne, Chancellor of the Exchequer, in a statement on the intentions of the Government with regard to the recommendations of the Geddes report, said that the proposed reduction of £2,200,000 from the Ministry of Health had been accepted, although it had not all been achieved by the same method as suggested by the committee. The committee had suggested that means should be taken to carry out the sale of many of the houses built under the Ministry of Health, and in that recommendation the Government entirely concurred, and they had authorized the Minister of Health to proceed in so far as it was necessary to remove the statutory restrictions on sale.

The Geddes Report.

Sir Alfred Mond, asked in the House of Commons what steps he had decided to take to give effect to the recommendations of the Geddes Committee's Report in reference to the Ministry of Health, said that he was anticipating that he would be able to obtain the entire saving suggested on his Estimates for 1922–1923, as recommended by the Geddes Committee, mainly on the proposal submitted by him.

Unemployed in the Building Trade.

Questions were put to the Minister of Labour with regard to the number of unemployed in the building trade. Dr. Macnamara informed Mr. Trevelyan Thomson that on January 31, 176,119 unemployed workers in the building trade were registered at the employment exchanges. Of these, 100,752 were labourers. The estimated amount of unemployment benefit drawn in respect of the week ended January 31 was £105,000.

State Assisted Housing Schemes.

In answer to a question from Mr. Lyle, Sir A. Mond said that he was afraid that no houses built by local authorities under assisted schemes had been let at a rent which would cover all charges on the capital cost. The sale of houses erected by the local authorities had been consistently encouraged by his predecessors and himself. Schemes for purchase by tenants by easy instalments had been approved for that purpose. Fifty-two local authorities had applied for permission to sell houses, but he had no information at present as to the number of houses actually sold by them.

Supply of Building Materials.

During a debate on a supplementary vote for grants to local authorities, Sir Alfred Mond referred to the work of the Department for the supply of building material, which originated under the Ministry of Munitions' obligation to provide bricks as well as other materials for the local authorities when the housing scheme was started. This passed into the hands of the Ministry of Health, and he had been engaged in liquidating it since he had taken office. He had been engaged for a considerable length of time in cancelling a number of brick contracts, which would not be required by the Government under the restricted housing scheme. He was asking the House to grant £250,000 for compensation in respect of the cancellation of these contracts. They had about 20,000,000 bricks in hand which would be handed over to the Disposal Liquidation Commission. They had cancelled 17 contracts for 142,000,000 bricks without compensation, and 197 contracts representing 336,000,000 bricks with compensation. They had cancelled about seventy-three contracts for tiles, representing 31,000,000 tiles, sixty-nine without compensation, and about ninety miscellaneous contracts. The total contract commitment cancelled under the arrangement amounted to £2,000,000. No contract had been made for 1921 1922, and no further contract was going to be made.

Mr. Thomas Hastings, Royal Gold Medallist

At a general meeting of the R.I.B.A. Mr. Thomas Hastings, of New York, was elected by the members, and his name will be submitted to the King as a fit recipient of the Royal Gold Medal for Architecture for the year 1922. In the event of His Majesty graciously signifying his approval of the award, the medal will be presented to Mr. Hastings at a formal meeting on June 26. Since the institution of the medal by Queen Victoria in 1848, it has only been conferred on American architects on two previous occasions. In 1893 it was awarded to Richard Morris Hunt and in 1903 to Charles Follen McKim.

Mr. Thomas Hastings, who was born in New York sixty-two years ago, entered the Ecole des Beaux-Arts in Paris in 188[illegible]. There he met John M. Carrere, and the two, on returning to America, entered the office of McKim, Mead and White as draughtsmen. They formed a partnership in 1885, and began to build the Ponce de Leon Hotel at St. Augustine, Florida. This was followed by other hotels at Richmond, Virginia, and Lakewood, New Jersey; the City Hall at Paterson, New Jersey; the "Life" and "Mail and Express" buildings in New York City and the Union Congregational Church at Providence, R.I. Hastings and Carrere also won the competition for the New York Public Library and the National Academy of Design.

In town-planning and similar work Mr. Hastings has carried out commissions at Baltimore, Maryland, Atlantic City, the Plaza, New York, Hartford, Conn., and Duluth. At Washington his hand is to be seen in the Capitol extension and the Senate and House of Representatives office buildings.

Mr. Hastings was appointed architect, Frederick MacMonnies being the sculptor, for the Marne Battle Monument; he designed the Cenotaph for the Unknown Dead at Washington, now in course of construction, and the Altar of Liberty and Victory Arch for the Mayor's Committee for Homecoming Troops, New York City. Among his other notable works are the Atlantic City War Memorial, monuments to McKinley at Buffalo, to John Paul Jones at Washington, to Lafayette at Paris, to Edgar Allan Poe at Princeton and to Bryant in New York, the Century and Globe Theatres, New York, academic halls for Cornell University, Yale Memorial Buildings, the principal office building of the Standard Oil Company in New York, and the United States Rubber Building, New York.

The R.I.B.A. and High Buildings

At a general meeting of the R.I.B.A. on Monday, March 6, the question of permitting higher buildings in London was discussed by a large and keenly interested gathering. The higher buildings proposal has been advocated by one Committee of the R.I.B.A., but has been condemned by three other Committees, and by the Council itself. Now the general body of Members has had an exhaustive discussion of the whole matter, and has decided by a very large majority—79 votes to 8—to support the Council's action, and to condemn the movement in favour of higher buildings.

THE High Buildings question was discussed in all its bearings; but from the beginning the opinion of the meeting as a whole was in little doubt. It is quite clear that the 120 ft. building will not be seen in London streets as long as the R.I.B.A. has a voice in the matter.

Mr. Maurice Webb proposed the first motion on the agenda: That this meeting approves the action taken by the Council in connection with the report of the London Building Acts Committee, and said that he spoke as a member of the City of London of the Arts Committee, and of the council.

Recapitulating the history of the movement, Mr. Webb said that architects had been dissatisfied with the London Building Act, and two years ago a committee was formed to go into the question. In November, 1921, an interim report was published dealing with high buildings and with buildings of large cubical content. A minority report, signed only by Mr. Arthur Keen and disagreeing with most of the findings of the majority, was also issued. Both reports were referred to the council, and were dealt with by the Town Planning, Arts, Science, and Practice Committees, three of whom adopted Mr. Keen's report. Various Councils and the Art Committee had prepared reports, and the proposals of the latter with regard to buildings of large cubical content were in fact adopted by the L.C.C.

They were opposed to Mr. Delissa Joseph's proposals with regard to the desirability of buildings 120 ft. high in the City, but were in favour of an occasional building higher than the rest. A system of zoning was, however, essential.

High buildings were generally condemned by the councils, and by the Town Planning Institute; the Retail Distributors' Association was, in fact, the only body to support the proposal. This was very natural, as it was inevitable that they, as business men, would look after their own interests.

If high buildings were generally erected the population would be greatly increased and the traffic and supply services heavily overloaded. These evils had been experienced in America, where they were adopting height limits in order to avoid them. Comparison with sky-scrapers was unfair; there were actually very few of these in New York. Mr. Webb showed diagrams illustrating Paternoster Row and Bouverie Street as they would appear if the buildings were raised to the 120 ft. limit.

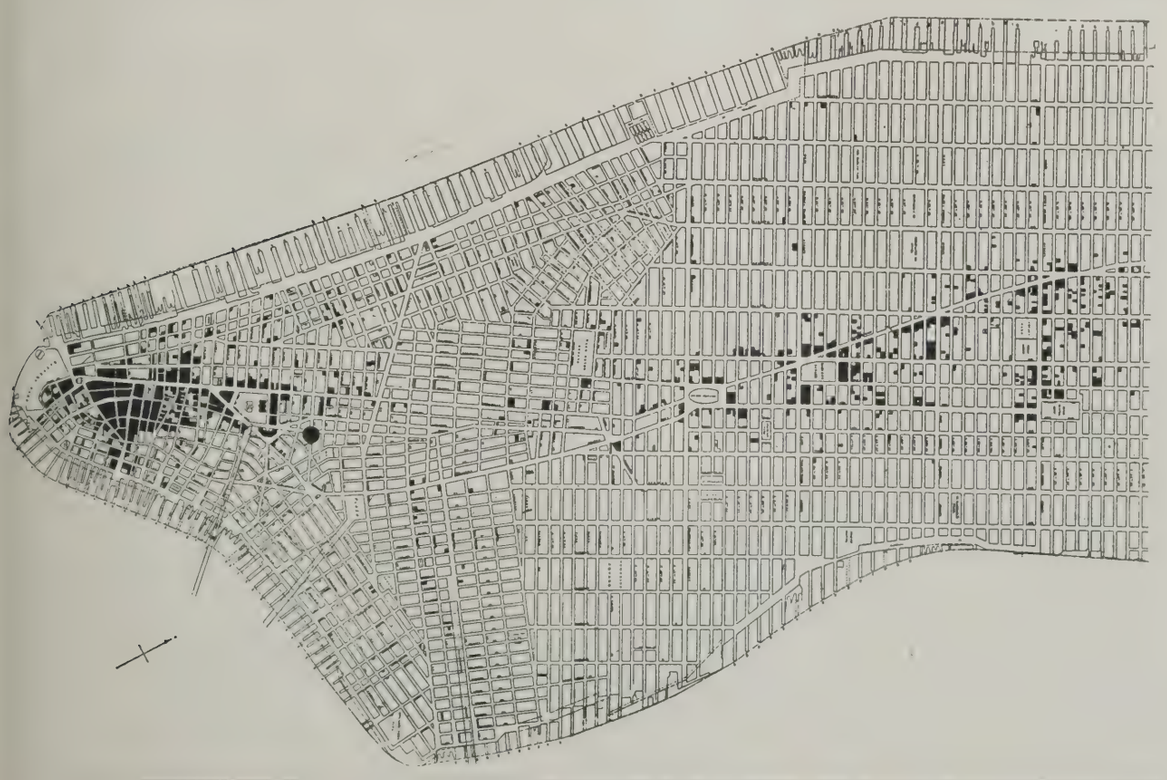
Mr. Raymond Unwin, seconding the motion, said that the Town Planning Institute had considered the matter in detail. It was important to realize the relative importance of the conditions of climate, latitude and air as between London and New York. The latter was in the latitude of Rome or Constantinople. Describing the congestion of New York traffic, Mr. Unwin said that the roads were at least 100 ft. wide, and had cross roads at frequent intervals but were nevertheless impassable in the morning and evening.

Increased height would mean an increased strain on the public services, and would impede light and air. This would be especially noticeable in London where the light was much less intense.

The question had been exhaustively considered in Scotland and condemned by the Royal Commission on Housing. They had gone so far as to ask for legislation forbidding buildings more than three stories high.

Higher buildings would mean a decrease in the number of London's open spaces, since they would inevitably result in raising the value of land. The horrors of tenements were vividly described, and Mr. Unwin said he had seen windowless rooms and rooms to which no daylight ever penetrated. The elevated railway was at all costs to be avoided. Eighteen months ago Germany had raised a similar agitation, so it was no new movement.

America was rich, Europe her poor relation; but even so we did not want to wear America's cast-off clothes. Sir



PLAN OF NEW YORK CITY (SOLID BLACK INDICATES BUILDINGS SIX STORIES OR MORE IN HEIGHT).

Martin Conway was quoted as saying that he would not willingly live below the thirtieth story, but the dwellers in the stories below were not to be envied.

Londoners were being asked to sacrifice public to private interests. There would be no general benefit in increasing the size of emporiums, and such open spaces as Lincoln's Inn Fields, which were public lungs, would be lost. The ideas incorporated in the higher buildings proposals were already out of date in the countries which had tried them.

Mr. Arthur Keen said that there would have been more signatories to the minority report but for shortage of time. The public said that architects were only mindful of artistic considerations and ignorant of economic conditions. They were as a matter of fact concerned with the convenience of cities, and the beauty of London was one of their chief concerns. High lines of buildings would destroy that beauty; Victoria Street, for instance, was a thoroughly uninspiring and demoralizing street. High buildings shut out light and destroyed beauty. London was haphazard and picturesque, full of ready-made pictures. Its skyline was its chief beauty, but this was being rapidly built out, as in Regent Street, King William Street, and Moorgate Street. The picturesque view to be seen from London Bridge, for instance, was now destroyed.

The building owner would be sure to take advantage of everything allowed him by the Building Acts, which were at present his only restraint.

New York was 700 miles south of London, and there was a great difference of light. Mr. Keen dwelt on the fate of a city population working in above-ground basements, and spoke of the traffic difficulty. It was argued that high buildings would solve housing difficulties, but there were severe trials and real dangers attached to five-story working-class dwellings. Children would get no recreation space, and it would be highly dangerous to allow them in the necessary lifts.

There were a few outstandingly good examples of high buildings, such as Whitehall Court, the Cecil, and the Prudential building in Holborn. The L.C.C. could continue to exercise their discretion as they had done hitherto, and the speaker hoped they would continue to consider the views of the artist and architect.

Professor Adshead said that he would have signed the minority report had there been time, and that he endorsed the verdict of the Arts Committee. He supported the general world principle of extending cities, not contracting them, and they should extend laterally, not vertically. The trams would take people out. In the Duchy of Cornwall the three-story limit was enforced, and he supported Mr. Keen in his remarks on housing in high buildings. The big offices were tending to move out to the suburbs. Smith's was in Stamford Street, the Pensions had gone to Kew, another office was going up at Acton. The segregation of business was one of the most striking features of modern life. London should not be reactionary; there was a tendency to reduce height; European towns were becoming lower.

High buildings were allowable on exceptional sites, and these should be designated on the zoning plan of London which was to be made.

Mr. Delissa Joseph said that he would be loath to vote against any action of the council, but that his committee had gathered much material and had long deliberations. The diagrams shown by Mr. Webb were a *reductio ad absurdum*, as it had never been suggested that high buildings should be erected on narrow thoroughfares. The speeches of Mr. Webb and Mr. Unwin were both directed against the New York practice, but they were not seeking to put up sky-scrapers; 150 ft. was the highest recommended.

It was not a selfish movement as they had no axe to grind, but business parts could not spread outwards; they must, therefore, go upwards. Sir Martin Conway, addressing the London Society, had suggested sky-scrapers 500 ft. high; this had raised a controversy and torpedoed the moderate movement. The matter had been brought within the purview of the council, which had appointed a deputation to attend conferences with the Buildings Acts Committee, the Fire Brigade, and medical authorities, the London Society, the City Lands Committee, and the Association of Retail Distributors. The movement was supported not only by the last-named body, but also by the City Lands and the medical officers of health.

The movement was in the interests of banking, insurance, shipping, and produce. It was essential that these businesses should be near the exchanges, and the square mile of the City could not possibly contain them. Higher buildings were the only possible solution.

He was not asking for rows of high streets, but only that the County Council should take a more generous view. In any case changes could only be gradual, and would cover a period of 80 years. London business required more space in central areas. It was the root and life; commerce and finance were its very basis.

Good would result from the provision of increased accommodation. It would mean a new assessment and increased capital for widening narrow thoroughfares. The danger of fire could be successfully met, as in the Royal Liver building, by a dry pipe and electric pumps.

Nobody could dispute the beauty of design of American high buildings. The recent concession made in allowing an increase from 60 ft. to 80 ft. would mean an extra floor. Harrods, for instance, could add four acres of extra floor space without buying an inch of land.

Mr. Joseph instanced high buildings already in existence, and said he would have liked the report referred back for further consideration.

Mr. Taylor, of the L.C.C., a past chairman of the Building Acts Improvements Committee, said that the traffic problem was pressing. As it was, 350,000 people came into the City daily, and it would be impossible to deal with the increased numbers which high buildings would entail. They wanted to spread the people, not concentrate them. Why did they not raise all buildings to the maximum permissible height of 80 ft. before raising an agitation for 150 ft. high erections?

There would be no sunshine with high buildings, and merchants did not want them. Kingsway was 125 ft. wide, and even there the 80 ft. height limit was amply sufficient.

The danger of fire was an importa point. The Brigade could tackle it they were given proper apparatus, t they could not do so under present co ditions. All their apparatus was t small, and it would cost millions to inst high-pressure mains. Drypipes would likely to fracture in a big fire, and th were ultimately dependent on mot apparatus. The Building Acts were r cast-iron, and the Council had discreti which they would continue to exerci They desired to help, and were willing make concessions in exceptional cas The meeting then voted on Mr. Web motion, which was carried by 79 to 8.

Mr. Delissa Joseph then put forwa his motion: "That this meeting appro the general principle of allowing bui ings to be erected, in certain positions, a greater height than is the present pr tice, subject to proper safeguards as construction, fire escape, and fire attac

He asked for some indication that work of his committee was acknowled and encouraged, and said that in public interest the question should left open for further discussion.

Mr. Austen Hall, seconding, said th Montreal was near the latitude of L don, with closely similar conditions, a that there ten-story buildings 120 ft. h were general and very satisfactory. H buildings should be allowed in London such sites as the Embankment. He not in favour of them in the City. report of the committee had been sen as a suggestion as to what could done, and he regretted that it had b turned down.

Sir Aston Webb said that he did want the question left open. R.I.B.A. was content to leave it in hands of the L.C.C.

Leonardo da Vinci had said "Let street be as wide as the universal heigh the buildings." Queen Anne's Mansi had been the cause of the law restric the height of buildings, and that erec was the strongest argument against h buildings, which would spoil the amenit of London.

Mr. Milne supported the resolut Mr. Davidge and Professor Beresford spoke against it. Mr. Vernon Cromp said that a zoning plan of London was only possible solution. The motion lost by 12 to 51 votes.

R.S.I. Congress at Bourn mouth

The Lord Mayor of London and Lady Mayoress will attend the Bou mouth Congress of the Royal Sani Institute, and will act as hon. presid of the "Conference of Representat of Sanitary Authorities and Section Personal and Domestic Hygiene." Of delegates have been appointed to at the meeting from—Australia: New S Wales Government, State of Vict Adelaide City Council; Tasmania: H Town Council; Canada: Quebec Pro cial Government; South Africa: Kin ley Municipality, Port Elizabeth Council; China: Hong Kong San Dept., Shanghai Municipal Council; mark: Danish Public Health D Singapore, Municipal Commissioners Ceylon Medical College.

The Condition of Lincoln Cathedral

BY the special courtesy of Sir Charles Nicholson, F.R.I.B.A., we are able this week to publish some striking ...strations showing the present condi... of parts of Lincoln Cathedral. Worn ... the ravages of time, the Cathedral is ...y in such serious disrepair that an ...ent appeal is being made for £50,000 ... immediate restoration work. Armed ...h the advice of Sir Charles Nicholson ... Sir Francis Fox, those responsible for ... care of the Cathedral have decided ...begin the work at once and to trust ... the generosity of those who value ... church to provide the necessary ...ds to carry the restoration to a suc...ful completion.

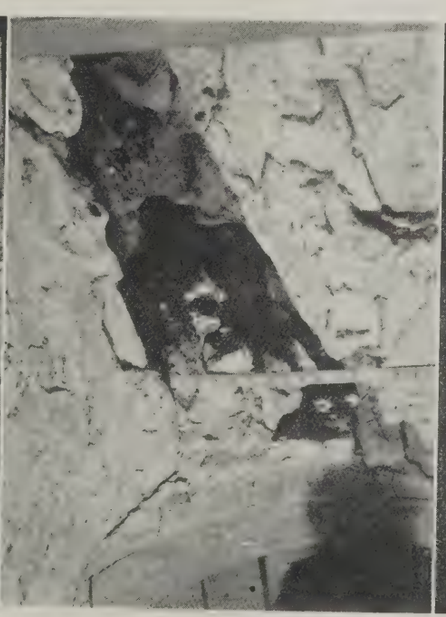
...ccording to Sir Charles Nicholson, ...se complete report was published in ... issue for January 23, the condition ...he north-west tower is serious if not ...gerous. It is considerably out of the ...pendicular, and the deviation is un...n, indicating that internal movement ... taken place. The tower has been ...forced with oak beams and iron ties, ...ny of the lower openings have been ...led up at different times, and the ...cture has been carefully watched; but ...t movements have recently been ...erved, and every storm weakens the ...er. It has been decided, therefore, ... the work of thorough repair has now ...me a matter of urgency.

...n the ground story settlement has ...rred in the vault, and one of the ...or ribs has become displaced. The ...tar in this part of the tower has ...shed very badly, and the rubble ...ting of the walls now seems to consist ...loose stones lying in dust. This ... of the tower, it is thought, can be ...e secure by thorough grouting of the ...le of the walling by means of the ...ting machine.

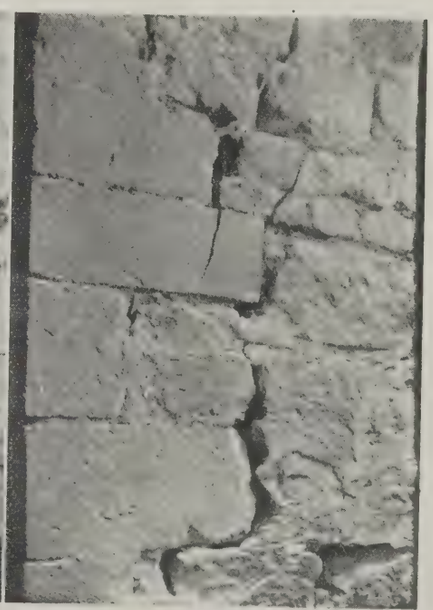
...ne intermediate stages of the tower ... Bishop Alexander's work (twelfth

N.W. STAIRCASE OF N.W. TOWER: LEVEL LEADING UP TO NAVE ROOF.

FISSURE IN NORTH WALL.



BREACH OVER DOORWAY.



CRACKS IN TOWER WALL, WEST SIDE.

CONDITION OF STONEWORK OF THE NORTH-WEST TOWER.

century). There is much more ashlar work in this part of the tower than there is in the basement, and the construction is lighter and stronger; but the superincumbent load of the fourteenth-century belfry has caused some crushing, and it should be possible greatly to strengthen the injured piers and walls by grouting.

Regarding the cracks in the central tower: The conditions here in some degree resemble those in the north-west tower, the work being of various dates, and the upper stage being in false bearing upon the double-walled three-bayed intermediate stage. The state of the tower and its daring construction give cause for anxiety, and it is agreed that it would be a wise and necessary precaution to grout the whole of this tower from the spandrels of the great arches up to the base of the belfry, and again above the belfry arches. A number of recommendations with regard to the repairs needed to other parts of the building are also made in the report.

On the part of the Dean and Chapter there has been no neglect of the fabric. Every available penny has been spent by them on repair and renovation, but hampered by the absence of their best workmen during the war and the subsequent rise in the price of materials and wages the Dean and Chapter have been unable to overtake the damage. The building is remarkably exposed by its position, and internal movement and the continual action of the weather have aggravated the damage.

We agree entirely with Sir Charles Nicholson "that it would be a disgrace to the present generation to allow such a fabric to become ruinous or to deteriorate for lack of preservative measures which would not cause a hundredth part of the capital outlay which our forefathers expended on its construction."

A SHORED-UP FLYING BUTTRESS OF LINCOLN CATHEDRAL.

The A.A. at Becontree

LONDON was one of the few towns whose council came to grips with the housing problem in pre-war days. It was the pioneer in erecting tenement blocks on the sites of former slum areas, and provided magnificent examples of what could be done to better the conditions of the people by means of better housing.

The post-war housing problem was of another character. Arising from other causes, other remedies were necessary. Whilst the clearing of further slum areas was still a pressing need, the acute shortage of houses in every part of Greater London, together with a large increase to the population, meant that no further slums could be cleared until new houses in great numbers had first been erected. This problem was not common to London, but the solution there presented greater difficulties, as the area involved was so great, and land capable of economical development so difficult to acquire.

Industrially, London is developing in an easterly and westerly direction, and housing sites were therefore acquired on the outskirts on these two sides. On the western side two sites were taken, one at Roehampton and the other at Acton. On the eastern side a site was acquired at Becontree, and this has been the subject of a visit by the Architectural Association.

The site, which comprises 2,800 acres, adjoins Chadwell Heath on the north, and Dagenham Dock on the south. Ultimately 22,000 to 23,000 houses are to be erected, and the proposal is to isolate the site from the surrounding country by "sylvan belts." These belts will remain open common land for all time, and by their inclusion in an official undertaking are probably the most important feature of the scheme.

The site, owing to its great area, is influenced by the town planning proposals of Greater London, and is divided into sectors by arterial roads. It is proposed to develop each sector separately, and only one sector is at the moment under development, that next to Chadwell Heath, and work was commenced in September 1920.

Great progress has been made; 2,666 houses are in course of erection, and a further 200 houses will complete this portion of the scheme. A further 1,000 houses have recently been sanctioned in the sector adjoining Dagenham Dock. Included in the scheme are sites for sho churches, cinemas, etc., but it is not p posed to build any of these at pres Provision has also been made on the branches of the G.E. Railway wh cross the site for three extra rail stations, and no doubt these will be ne sary should the whole scheme be p ceeded with.

The houses in course of erection ar four types: living-room and two b rooms and three bedrooms, and liv room and parlour with three bedro and four bedrooms; and a certain num of two-storied blocks of flats are inclu The houses are built principally of br and the remainder are of concrete c struction. Of the latter two meth predominate, the first the Fidler syst which consists of two walls of br concrete and the cavity filled in w ballast concrete. The second syster the Winget Block, which approxim to a masonry wall.

The walls to the majority of the b houses are 9 in. solid, and these have b rendered in order to meet the Minis of Health's requirements. All brickw throughout the scheme is built in cem mortar.

ing to the shortage, many varieties
aterials have been used. Roofs have
covered with Welsh and Delabole
s, pantiles, plain tiles, single and
le Romans, and among others the
eilles tile. Owing to the shortage
lasterers many of the rooms are
l with asbestos sheets in panels, and
esult is a pleasing one.
mpared to other housing schemes
one has seen, the houses appear
r, but no doubt the Ministry of
h's concession regarding the heights
ilings, which in this case are in-
ed to 8 ft. 6 in., is responsible for
All the houses are fitted with a
hot-water system, Parkinson's cot-
gas-heater being one, and the ordin-
ombination range the other, and the
systems can be used independently
gether.
N. Beck, one of the L.C.C.'s housing
als, conducted the party round the
and supplied many interesting par-
urs. Later, the party were enter-
d to a tea provided by the contrac-
or the scheme, Messrs. C. S. Wills, of
ria Street.

R. W. S.

R.I.B.A. New Members

At the last general meeting of the
I.B.A. the following six Fellows and
ty-eight Associates were elected. All
Associates have passed the Special
Examination :—

FELLOWS.

, Frederick J., M.C.
912], Stamford.
Arthur J. [A.1894],
on, Somerset.
s, Percy E., O.B.E.
920], Cardiff.
, Henry F. [A.
], Stamford.
, John W. [A.1905],
deen.
Robert G., Junr.
902], Aberdeen.

SSOCIATES

Joseph S., Birken-

Frederick W.,
gate.
l, Ernest H.
l, Harold T. B.
l, Percy J., Bristol.
s, Albert, Notting-

nt, Eugene E.
Henry B., Stafford.
eld, Edward H.
eld, Henry L.
g, John V.
n, Percy K., Leices-

Leslie C.
Frank C.
George T., Sun-
ad.
ead, Albert D.,
.I.
, Edgar, Melton
bray.
, Frederick W.,
Penarth, Glam.
Richard, Bury,
s.
William, Sunder-

, John, Exeter.
y, George, Pren-
heshire.
idney C.
l, Victor G., Ports-
a.
ic, Cheltenham.
Herbert J., Sunder-

ley, Reginald A.,
Cheshire.
Gilbert H.
an, Harold W.
Albert C.
g, Edgar W.
l, Frederick G.
s, Wilfrid B.,
N. Wales.
George H.
, William F.
od, James H.
Hugh N., South-

ddo E., Claverley,
shire.

Haird, Tom W., Leicester.
Harding, Fred H., Leicester.
Haughan, John H., Silloth, Cumberland.
Heard, Gordon T.
Holliday, Albert C., Liverpool.
Howells, David J., Swansea.
Hunt, Reginald, Oxford.
Hunter, Harry C.
Johnson, Campbell M. C., Gloucester.
Jones, Reginald H.
Jones, Ronald H., Neath, S. Wales.
Jones, Tom L., Newport, Mon.
Keesey, Walter M., M.C., A.R.C.A., A.R.E.
Kerr, James A., Sydney, N.S.W.
Kirby, Edward, Wellingborough.
Knott, Albert L.
Langdell, George A.
Lavender, Edward P.
Leathart, Julian R.
Lewis, George S., Liverpool.
Luke, Reginald L.
Mahon, Sidney E., Liverpool.
Martin, Nathaniel.
Mauger, Paul V. E.
Miller, Claude St. J. G.
Minty, Robert J. H.
Mitchell, Edward A.
Newton, Percy M., Hull.
Norton, Charles J.
Osbaldiston, George A., Brisbane, Australia.
Owen, Arthur T., New Brighton, Cheshire.
Penman, Edward M.
Price, Harry J. P.
Prichard, Lionel A. G., Liverpool.
Rees, Verner O.
Revitt, George, Derby.
Ridge, Thomas, Oswestry.
Rippingham, Thomas F.
Scriven, Charles.
Smith, Alfred, Leicester.
Smith, Cecil.
Sturgeon, John H., Brighton.
Sutcliffe, Thomas W., Rochdale, Lancs.
Thorburn, Richard.
Trimm, Charles A., M.C.
Walker, Reginald B.
White, Charles S.
Williams, Edwin, Liverpool.
Williams, Howard, Cardiff.
Winn, Thomas J. R., Truro, Cornwall.

Enquiries Answered

Six-inch Flues.

D. M. writes : "Can you inform me whether 6 in. internal diameter flues have been used in any housing scheme in England, or in any cottage type of building for ordinary coal fires ?"

—There are a few cases where 6 in. internal diameter pipes have been used for ordinary flues, but for the most part the results have not been satisfactory. At Blighmont Park, Southampton, housing scheme they were set in concrete breasts, but they gave such unsatisfactory results that their use was abandoned and 9 in. diameter substituted. It is doubtful if good results can be obtained with a less diameter than this for ordinary purposes.

H. J. B.

Safe Load on Curved Floor Plate.

C. A. writes : "What method or formula must be adopted to find the safe load which could be carried by the $\frac{5}{8}$ in. curved floor-plate (steel) as shown in the sketch [reproduced] of part of a steel bridge ?"

—The thrust on an arch may be measured by the formula $\frac{Wl}{8d}$, where W is the total load in tons distributed, l = span in inches, d = rise in inches. In the present case we have a $\frac{5}{8}$ in. curved steel plate 36 in. span and 2 in. rise. Taking 1 ft. run of the plate and allowing $6\frac{1}{2}$ tons per square inch as the safe load, we have

$$\frac{Wl}{8d} = \frac{W \times 36}{8 \times 2} = 2\tfrac{1}{4}\ W.$$

This has to be resisted by $12 \times \frac{5}{8} \times 6\frac{1}{2}$, so that $W = \frac{12 \times \frac{5}{8} \times 6\frac{1}{2}}{2\frac{1}{4}} = 21\frac{2}{3}$ tons distributed. As the span is 3 ft. this will be equivalent to 7.22 tons per square foot. So far the floor-plate itself; now the riveting must be considered. The proposal is to use $\frac{3}{4}$ in. rivets at 4 in. pitch, making three rivets per foot run. The area of a $\frac{3}{4}$ in. rivet is 0.44 sq. in.; allowing 6 tons shear stress per sq. in. and three rivets will give a total shear strength of $0.44 \times 6 \times 3 = 7.92$ tons against the $21\frac{2}{3}$ tons which the plate can stand, or only $\frac{7.92}{3} = 2.64$ tons per square foot for the safe load. Further calculation will show that if the pitch be reduced to 3 in. the safe load per square foot will be increased to 3.52 tons per square foot. It is evident that it will be better to increase the diameter of the rivets to, say, $\frac{7}{8}$ in., then with 4 in. pitch the safe load will be 3.6 tons per square foot, or with 3 in. pitch, 4.8 tons. No hint is given as to the actual load the bridge has to carry, but in these days of motor lorries with heavy point loads, five tons per foot super is not too much to provide for. Much useful information on bridge loads may be obtained from a pamphlet entitled "Loads on Highway Bridges," published by the Concrete Institute, 296 Vauxhall Bridge Road, London, S.W.1, 1s. 2d. post free,

HENRY ADAMS.

Duties of Insurance Surveyor.

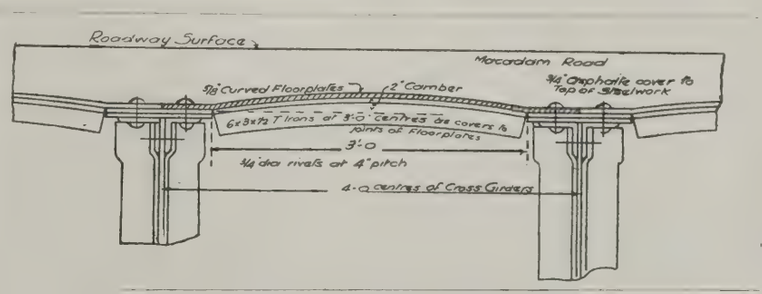
W. S. writes : "Can you tell me whether the position of surveyor to a fire insurance company is a good one ? Please also give me an outline of the duties of such a surveyor, and inform me whether any particular knowledge or special training is required ?"

—The position of surveyor to a fire insurance company is a good one, when a man is fully qualified by experience. The insurance surveyor acts as a technical adviser to his company and is, consequently, in a position of importance and responsibility. The duties to be performed generally consist of inspections and reports, with an insurance plan, on various properties which it is proposed to insure, or which may have been insured by another company with whom the client are dissatisfied, or by another company who may wish to effect reinsurance.

It will easily be seen that this work is exceedingly varied in character and demands a wide knowledge of the general principles of fire insurance, and a good knowledge of the numerous tariffs of the fire offices committee, a knowledge of building construction, particularly from the point of view of fire insurance business, protective devices—such as sprinklers and apparatus in connection with them, pumps, etc., hydrants, extinguishers, etc. Furthermore, a wide knowledge of the various processes of manufacture and the business generally carried on in the premises inspected is essential. A knowledge of values is important, as often the company is asked by the client the amount for which he should insure his premises and the contents. Some knowledge of chemistry is essential.

With regard to special training, the majority of surveyors, I think, obtain most of their knowledge directly in an insurance office. A few years in an architect's office is exceedingly valuable as giving a sound knowledge of construction, but much more than this is required. A good deal of the essential knowledge can only be obtained in the office of a fire insurance company, as a lot of the information is of a private and confidential character.

If your correspondent were to peruse my book on "Fire Protection in Buildings," published by Messrs. Crosby Lockwood and Son, and also the article in "Specification," which was written by me and revised by Mr. Alan E. Munby, he would obtain some idea of the technical know-



"SAFE LOAD ON CURVED FLOOR PLATE"

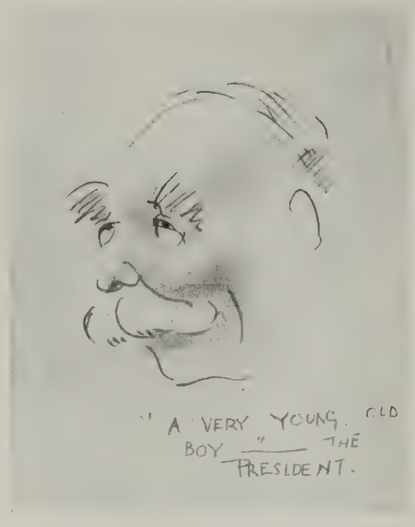
ledge required, but I should strongly recommend him to get in touch with a fire insurance surveyor of one of the important companies. Perhaps a call at the head office of either The Royal Insurance Co., Ltd., The State Insurance Co., Ltd., or The Liverpool, London and Globe Insurance Co., Ltd. would be useful.

H. GUY HOLT.

The Institute of Builders' Dinner

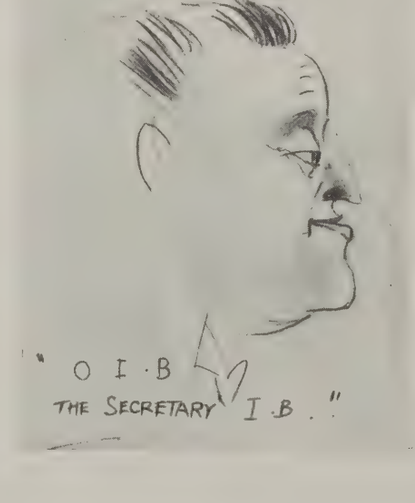
Last Wednesday the Institute of Builders held its annual dinner at the Hotel Victoria, and needless to say it was a very sumptuous and imposing affair. The dinner was perfectly served, and was rounded off and laid to rest, as it were, by a very delightful grace, "For these and all Thy mercies," composed in 1545. The President, Mr. Frederick Shingleton, then proposed the King, the Queen, and other members of the Royal Family. After these toasts had been drunk, Mr. F. T. Gayer gave "The Imperial Forces," to which Major Ralph J. Holliday, M.C., responded for the Army and Navy. Following a song by the Wandering Glee Singers, who were responsible for a good deal of the evening's enjoyment, Mr. Roland B. Chessum rose to propose "The Architects and Surveyors." In order, he said, that the ladies might enjoy the excellent programme of music arranged for the evening's entertainment the President had asked him to be brief and to the point, so that he did not intend to waste the time of his audience by saying anything. He then proceeded to describe everything he was not going to say. Immediately after this Mr. W. V. Robinson, who hails from Canada, gave some 'reminiscences" of that gay country, which apparently, like many other countries, has been thoroughly over-run and subdued by the Irish. He was really very funny and clever, but his eloquence paled before that of the next speaker, who rose to reply for the Architects and Surveyors. This was Mr. Paul Waterhouse, P.R.I.B.A., who caused such commotion amongst his audience by a story about a purlin, that there was some danger of one prominent builder becoming hysterical. That was apparently avoided by the presence of mind of a passing waiter, who poured the Pêche voilée Cavalléria he was carrying down the hysterical builder's neck. This action, together with a touching poem on the Quantity Surveyor (author unknown), which Mr. Waterhouse read aloud, restored the poor fellow to his customary depression.

After Mr. W. H. Nicholls had given "The President," and the President had fittingly replied, Mr. E. J. Brown proposed "Our Guests." He apologized first of all for the extraordinarily uninteresting character of the speeches that had preceded his own, and for the extraordinarily uninteresting people who had given them. There had been one or two solitary and brilliant exceptions, he said, but the exceptions had been either architects or surveyors. The inference to be drawn from this was obvious. These gentlemen, unlike the gentlemen of the building trade, had unlimited time in which to prepare their speeches. He further pointed out that for the only responsible positions of the evening, for proposing and replying for the guests, two



members of one illustrious house had been singled out—two members of the illustrious house of Brown. He was one of them; the other was going to respond to him. The other, Mr. G. Turville Brown, then arose and responded for the guests, referring in a passage of wit to the foregoing speaker as Mr. Ernest J. Black. It was the duty of every after-dinner speaker, he went on, to tell a story. He then told a story about a silk hat. After that he told another story. He then told another story. The audience immediately broke up and went home.

Besides the President and Mrs. Shingleton, there were also present amongst some 200 hundred members and guests: Mr. Paul Waterhouse (President R.I.B.A.) Mr. E. J. Sadgrove (President S.A.), Mr. W. G. Newton (President A.A.), Mr. G. Turville Brown (Master of Worshipful Company of Tylers and Bricklayers) and Mrs. Brown, Mr. Roland B. Chessum (President London Master Builders' Association) and Mrs. Chessum, Mr. G. Topham Forrest (Superintending Architect L.C.C.) and Mrs. Topham Forrest, Mr. E. J. Brown (Past-President I.O.B.) and Mrs. E. J. Brown, Mr. A. J. Forsdike, Mr. S. Smethurst (Past-President I.O.B.), Mr. G. W. Humphreys (Chief Engineer L.C.C.), Mr. H. E. Knott (President Timber Trades' Federation), Mr. Rd. Tasker and Mrs. Tasker, Mr. F. L. Dove (Past-President I.O.B.), and Mrs. Dove,



Mr. G. M. Burt and Mrs. Burt, Mr Higgs (Past-President I.O.B.), Mr. T Angell, Mr. B. C. Aldous, Mr. Reg. Burrows, Mr. C. E. Elliot, Mr. W. S Gordon, F.R.I.B.A. and Mrs. Gordon, Walter Lawrence (Past-President I.O Mr. G. J. Aldous, Major A. D. Spoo M.C., Mr. J. Graham Mallett, Mr Lovett Gill, F.R.I.B.A., Mr. F. Verity, F.R.I.B.A., Mr. F. G. Hoo Major Ralph J. Holliday, M.C. (V President I.O.B.), Mr. H. T. Hollo and Mrs. Holloway, Mr. James Su (senior Vice-President I.O.B.) and Storrs, Mr. H. Willcock (Vice-Presi I.O.B.), Mr. A. Roome, Mrs. G. A. Roo Mr. F. J. Gayer (Vice-President I.O and Mrs. Gayer, Mr. Montague Whe F.R.I.B.A., Lt.-Col. A. J. Barry, Mr Dudley Bartlett, Mr. F. Wall and Wall, Mr. Lionel Grace, F.R.I.B.A. Mrs. Grace, Mr. Sidney Tatc F.R.I.B.A. and Mrs. Tatchell, Mr. Coleridge, F.R.I.B.A.

Law Reports

Acting as his Own Archit and Surveyor

Crosley v. Harries.

March 7. Official Referees' Court. Before Sir Francis Newbolt.

In 1919 Commander Harries boug house at South Hayling, known the "The Grotto," and employed Mr. T Crosley, a builder of Hayling, to con it into a bungalow, and it is now kn as "The Bungalow." For the bal of his charges for carrying out this w Mr. Crosley brought an action.

The original account amounted £2,358 9s. 10d., of which £1,000 had paid on account, leaving a balanc £1,358 9s. 10d., the sum claimed in action. In respect of this the defen paid £300 into court with a denia liability, and in his defence he ple defective work and materials, cou claiming £1,072 18s. for damages work which he would have to do to plete the building.

There was no written contract, and plaintiff's case was that defendant, acted as his own architect and surve ordered the work from time to time a building proceeded. It was said tha ordered work one day and cou manded the orders the next day, su tuting something quite different. necessitated considerable additions to cost of the building.

The onus of proof in respect of counterclaim being upon the defend his case was taken first, and the evid given by his witnesses was gene relative to alleged defective work overcharges.

The case was first before the Cou the 21st of last month, and stood journed during defendant's cross-exam tion, owing to his illness. On the hea being resumed later, defendant's co stated that defendant was still un to appear in court, as his illness serious, involving a surgical operatio

Under the circumstances it was dec to go on with the plaintiff's case, postponing defendant's further cross-exam tion, and expert evidence was calle prove that the work had been pro done by plaintiff, and that the ch were fair and reasonable, Mr. A Ed. Codswell, surveyor, of Prude

ildings, Portsmouth, testifying to that ct. He also gave it as his opinion that ious items which were included in the nterclaim were charged at an excessive e even if the work were necessary, ich he denied.

This witness was cross-examined at siderable length by defendant's coun- and in the result the hearing was ourned for two months, when it was ed that Commander Harries would be or the completion of his cross-examina- n.

Each of Covenant—Housing and Town Planning Act

ton and others v. Alliance Economic Investment Co., Ltd.

March 2. Court of Appeal.

efore Lords Justices Bankes, Atkin, and Younger.

This was an appeal by the defendants m a judgment of Mr. Justice Coleridge n an action by the plaintiffs, the Gover- s of Alleyn's College, Dulwich, to over possession of Tollgate House, ich the plaintiffs let to a Mr. Bayldon eighty years from March 1907, at . 11s. 6d. a year. The lease contained ovenant not to permit or suffer the mises to be used otherwise than as a arate dwelling-house. There was a vision for re-entry on the non-obser- ice of any of the covenants. Mr. ldon assigned his house to the de- dants, and in 1919 they let it to a Mackintosh at £150 a year, with ilar covenants, and the addition of a enant not to assign, underlet, or part h possession of the premises or any t thereof without the consent of the ors. In 1920, Mackintosh, in breach his covenants, let the premises in arate weekly tenements at varying ts without the licence or knowledge he defendants. On the matter being ught to the notice of defendants they ained possession as against Mackintosh, they took no action against the sub- ants. In 1920 the Rent Restriction came into operation, and the de- dants became sympathetic with the sub- ants, and finding them respectable, not wish to turn them out. They said the Rent Restriction Act would night prevent any proceedings against sub-tenants being successful.

ustice Coleridge held that there had n a breach of covenant and that the endants were only entitled to relief inst forfeiture on their undertaking to permit further breaches and not pply for an order under Section 27 of Housing and Town Planning Act, 9. Defendants refused to give the er undertaking, and judgment was ered for plaintiffs.

he Appeal Court allowed the appeal set aside the judgment of Mr. Justice eridge, holding that having regard to Act of 1920 the defendants had not tained from taking any step which y could be reasonably expected to take, t there was reasonable ground for nking that there was no certainty that proceedings which they might take ld succeed, and there was every bability of failure; and that plaintiffs' e against the defendants fell short of proof which the plaintiffs were bound give in a case of the kind that there on the defendants' part an abstention n doing something which they could sonably be expected to do.

Micheli San Michele of Verona

Mr. H. Worthington, M.A., A.R.I.B.A., lecturing before the Birmingham Architectural Association on "Micheli San Michele of Verona," spoke of the danger of blind enthusiasm for a past style unless tempered by critical historical study, and said that the best way to study a period was to specialize on a man. San Michele, he said, was a typical child of his age, with a passion for Roman antiquity; yet he faced the needs of his day, and in his fortifications adapted the needs of modern military engineering to meet the developments of modern artillery. He recast the planning of town and country houses to meet a growing sense of security in city life. One of the last of the Renaissance giants, he summed up the period of culmination, and showed traces of the coming decadence. In charcter, San Michele had the enlarged outlook of one who constantly associated with great men. He was a loyal citizen, a staunch servant of the state, and a devoted friend. He practised in the same manner as modern architects, and had his share of awkward and exasperating clients.

Mr. E. F. Reynolds, F.R.I.B.A., proposed, and Mr. B. J. Fletcher seconded, a vote of thanks to the lecturer. Mr. H. T. Buckland, F.R.I.B.A., presided.

South Wales Architects' Dinner

The annual dinner of the South Wales Institute of Architects has been held at Cardiff under the chairmanship of Mr. H. C. Portsmouth (president of the South Wales Institute of Architects). Among others present were: Messrs. Paul Waterhouse, M.A., P.R.I.B.A., Edwin Sadgrove (president, Society of Architects), E. P. Warren (president, Berks, Bucks and Oxon Architectural Association), T. Alwyn Lloyd, A. W. Hennings (president, Manchester Architectural Society), William Thomas, D. Lleufer Thomas (Pontypridd), F. R. Yerbury (secretary, Architectural Association), Percy Thomas (president-elect, South Wales Institute of Architects), Ivor Jones (secretary), H. Teather (treasurer), and Dr. W. Evans-Hoyle, M.A.

"The Royal Institute of British Architects, the Society of Architects, and the Allied Societies" was submitted by Mr. H. C. Portsmouth, who stated that the South Wales Society now numbered about 200 members, and had been nearly trebled in the past two years.

Replying, Mr. Paul Waterhouse observed that the choice of Cardiff as the venue of their meeting this year would afford an opportunity of seeing some of the finest modern specimens of municipal architecture, disposed and displayed with a grace that other towns might envy.

The President submitted "The South Wales Institute," and in reply Mr. Percy Thomas (president-elect) spoke enthusiastically of the work being done at the Cardiff Architectural College.

An Ideal Reception Room

An exhibit at the Ideal Home Exhibition at Olympia which should strongly appeal to those of cultured taste who are anxious to study economy is that of Messrs. Gaze, of Kingston-on-Thames. The treatment of a reception-room with the adjoining alcove is shown in the accompanying illustration. Red and grey are the principal colours, with accents of green and gold. Outstanding novel features are the gilded reed-like sun screens, and the merging of the wall treatment into the ceiling without the use of a cornice. In the alcove is a new wall treatment of veneer panels with intense black bordering which is echoed in the carpet. A model of an intriguing bungalow, constructed substantially of brick, illustrates forcibly the possibilities of a comparatively small outlay with the building department of Messrs. Gaze.

RECEPTION-ROOM EXHIBIT AT THE IDEAL HOME EXHIBITION.

"The Architects' Journal" Essay Competitio

IN the annual competition for the prize offered by the proprietors of this JOURNAL for competition by students at the University College School of Architecture, London, Professor A. E. Richardson, F.R.I.B.A,. and Mr. Arthur Stratton, F.R.I.B.A., consented to act as judges. Mr. Stratton has favoured us with the following report, and we have much pleasure in acceding to his suggestion that we should print the prize-winning essay, which was submitted over the pseudonym "Bramante," who, on the opening of the sealed envelope accompanying the essay, was found to be

MR. J. BUCKLAND WRIGHT.

who is invited to select architectural books to the value of the prize.

Mr. Stratton's report is as follows: In accordance with your wishes, Professor Richardson and I have read the essays submitted in the above competition.

We have no hesitation in selecting the one enclosed by "Bramante," although the others have merit. The winning essay is short, but the conditions stated that the essays should not exceed 1,000 words. In awarding the prize to the author of this essay, I express the hope that you will consider it suitable for publication, and I regret that owing to many of our third-year students having entered for their R.I.B.A. final last December there were not more entries. The smallness of the entry must not be taken as any indication of lack of interest by the students or want of appreciation on our part.

The Prize Essay

A Student's Vision of Architecture

Self-expression, the impress of an individuality on inanimate objects, is one of the most absorbing and interesting studies in the world. To be able to detect the intimate character of a fellow-being has always an inexpressible charm, besides pandering to the innate curiosity which most of us possess, and dull would life be if one was not afforded opportunities for its gratification. Those sudden wonders would be lost, those emotions of sympathy and understanding which are experienced from time to time on realizing the hidden meanings, characteristics, and potentialities of men through their works, whether it be a building, a picture or a poem. Appreciation is the greatest gift and the greatest pleasure in life, but nothing can be appreciated without the study and attention, which alone can bring an intimate sympathy and understanding of the spirit of their creation. There is nothing which does not tell us a story, which does not speak, but before we can understand the language must first be mastered. In architecture this knowledge is needed perhaps more than in any sphere of art. No other study seems to require such a general and wide-spread knowledge, affecting as it does every moment of our lives, providing in very fact the stage of life itself. Once the student has embarked upon his course of learning new worlds are suddenly opened to his gaze. He begins to realize the value of his work and the inevitable pleasures which must follow in its train. Life suddenly teems with new interests, new beauties, to which his senses had until then been blind.

Every building, every street, dull and commonplace before, now possesses its own individuality, charm or ugliness, expressing the history of design and construction, as well as the intentions and requirements of its architect and owners. Who does not experience the subtle atmospheres and indescribable impressions that certain buildings have on us, and yet how few understand what these impressions are, or can express their meanings? It is the knowledge that he is suddenly beginning to realize and appreciate these sensations that strikes the student of architecture with a blinding force. He realizes that up till then he had been groping in the dark, admiring or condemning because he was expected to do so, without any rhyme or reason for his opinions, save vague inborn impulses.

But as the light dawns, he gradually realizes the fundamentals of design, reaching far away back to the beginnings of time, the difficulties and limitations of planning and construction. Each moulding and ornament now bears a new significance, telling its own story, and incidentally that of the ages. Questions, till then hardly formed, answer themselves as they appear. It is as though he were a child, obeying instinctively the orderings of its life, till suddenly realization comes. The workings of the world are seen in their true light, freed from the mists of childish ignorance, and with this knowledge comes the power of judgment.

In his progress, however, it is not a limited field of appreciation which is opened out to the student. That is one of the greatest qualities and occasionally one of the pitfalls of architecture. There is hardly any sphere of human art or science which has not some bearing, direct or indirect, on this all-absorbing subject. Whatever his temperament, philosophical or materialistic, he will find something to suit his taste, whether it be colour effects or design, the parasites of timber or the problems of sewerage.

But whatever his particular line of specialization may be, appreciation will be developed and intensified. The world will suddenly open out, and towns and museums, formerly dull and uninteresting, will become sources of the most exquisite pleasures. With all this must come the realization of the narrow margin of years which separates him from himself of former times, when, in comparison, there seemed so little of interest in the world. The happiest man is he who can appreciate most, who, wherever he is, finds things of beauty or interest, and it is this faculty which is developed in the study of architecture. It ought to be made an essential part of education, as it was in the middle ages, but with the specialization required by modern life, there seems little hope of its materialization.

Not only are his powers increased by a healthy appreciation, but discrimination is developed, and self-expression, that most valuable of all attributes, is immeasurably facilitated. His new interests take him ages back, four thousand years to the arid sun-bleached borders of the Nile, and from there he is led by ea stages down the centuries. From t engineering feats of the Pyramids to t perfection of ancient Greece, he can tra marvelling, through every phase, rise a fall of architectural style, through Goth and Renaissance till he reaches the prese day. Then, and only then, can he reali what a wealth the journey has broug him, gaining, as he must have done, fir senses of proportion and beauty, a clea understanding of life and human effo and above all, an intense appreciation the beauties of this world. The stu has given him not only a vision of t past, but a clearer vision of the prese and he is consequently all the bett equipped for his struggle with the futu

"BRAMANTE."

Beauchamp Chapel: Urgent Repairs Needed

An urgent appeal is being made £5,000 for the repair of the Beauchar Chapel, Warwick. The previous effo made to raise money for this purpose w checked by the war. Mr. Philip Chatwin, the architect, at that time p posed to point all the open joints, runni liquid cement into all the cavities in t walls, buttresses, and vaulting; to repla missing stonework where its absence w a source of danger to the stability of t structure, and to treat with a suita preservative solution all the stonewo which is more or less decayed. It w the intention to carry out these absolut necessary repairs in a most conservat manner, every fragment of old work w to be jealously guarded, and nothing n was to be added if in any way it was p sible to avoid it. To-day the same p posals hold good, except that the p state of the building is naturally inter fied. In 1915 the committee spent wh little money had been raised in repair the parapets.

The beautiful vaulting is entir dependent for its support on the b tresses, and these are badly in need repair. They are full of open join allowing the weather to get in, and mu of the stonework is decayed. When is realized that, unless the buttresses kept in a proper state of repair, the vau ing will collapse, the urgency of the mat is evident. Donations may be sent Lloyds Bank or the London Joint C and Midland Bank, Warwick, or to organizing secretary of the committ Mr. Charles Armstrong, High Stre Warwick.

Publications Received

"Manufacture of Portland Cemen By Arthur C. Davis, M.Inst.C. M.I.Mech.E., F.C.S. Third edition, vised and enlarged, with 100 illustratio Price 25s. net. John Falconer, 53 Up Sackville Street, Dublin.

"Building Materials." By A. Laurie, M.A., D.Sc., F.R.S.E., F.C Price 6s. net. Oliver and Boyd, Twe dale Court, Edinburgh and 33 Paternos Row, London, E.C.

The Week's News

Mr. Ernest Newton's Estate.

. Ernest Newton, R.A., left estate e value of £11,313.

London Housing Schemes.

their Ilford and other housing nes the City of London Corporation spent £957,124.

The Royal Wedding.

command of the King, the President e R.I.B.A. and Mrs. Waterhouse were ed to be present at the wedding of cess Mary.

Collapse of French Castle.

rt of the historic French castle of beau, which was used as the town hall arignane has collapsed. The south le, which was built in 1463, was com-ly destroyed.

Building Guild Progress.

ie National Building Guild, which into existence less than two years reports that there are now 135 local s in the country, carrying out con-s amounting to £2,250,000.

New Hotel for Chicago.

new hotel is to be begun at Chicago May 1. It will contain 3,000 rooms baths, a convention hall seating people, an exhibition floor of 35,000 re feet, and a banqueting hall to seat people.

Old Roman Wall Discovered.

ring the excavation of a site imme-ly adjoining St. Peter's, Cornhill, ce of the old Roman wall of the City ondon, 8 ft. to 10 ft. long and 2 ft. , has been discovered.

A New Thames Bridge.

ork is to be started on the construc-of the much-needed bridge over the nes at Lambeth. The old bridge is pulled down and a new way out of lon constructed that will link up eferry Road with the south side of iver just west of Lambeth Palace.

A Modern Fortress.

Achille Duchêne, who remodelled heim House, has designed the new era home of M. and Mme. Jacques an. The building is an octagonal in pure mediæval style, with immense es of masonry, and shows many acteristics of the old monastic style.

Building Overtime Ban.

No overtime must be worked except ases of established urgency." This uction has been issued by the Na-il Federation of Building Trades atives to all affiliated societies and ches.

Exeter Cathedral Appeal.

ie Dean and Chapter of Exeter edral have issued an appeal for half llion shillings to enable the cathedral e properly preserved. The exterior require serious attention, and in parts the stone work is becoming erous.

Removal of the Park Huts.

Sir John Gilmour, replying for the First Commissioner of Works, informed Major Barnett that the First Commissioner was most desirous that all the temporary buildings, erected for war purposes in the parks and open spaces should be cleared at the earliest possible date, and he was sparing no effort to that end. Good progress was being made.

Chandos House for Sale.

Chandos House, Cavendish Square, which has been placed in the market, was erected from the designs of the Adam Brothers in about 1770. The house has many features of exceptional beauty and originality. It has a fine exterior, elaborately carved mahogany doors, and beautiful marble mantelpieces, and is in all respects a very dignified residence, of much interest historically.

London's New Telephone Exchange.

An additional telephone exchange, the twelfth to be built in London within the last two years, has been opened, and will be known as Bishopsgate. It is proposed eventually to erect a special building for the Bishopsgate Exchange, which will be one of the largest in London. The equipment is temporarily located in the premises partly occupied by the recently opened Clerkenwell Exchange in Ironmonger Row, Lever Street, E.C.1.

Victoria and Albert Museum.

A remarkable collection of objects of German and Netherlandish origin has been placed on view in Room 106 and the adjoining staircase in the Victoria and Albert Museum. The collection has been secured chiefly from the income derived from the money bequeathed to the museum in 1910 by the late Captain H. B. Murray. Prominent among the important features are tapestries, caskets, works of porcelain, prints and drawings, ecclesiastical plate, jewellery, miniatures, and stained glass.

Early Christian Frescoes Discovered in Rome.

Early Christian frescoes have been discovered in a hypogeum in Rome by Professor Paribeni, director of the Diocletian Museum, and Dr. Bendinelli, Inspector of Excavations. Professor Paribeni thinks the frescoes were executed by an artist belonging to one of the many Gnostic schools which flourished in the first centuries of the Christian era. Most prominent among the frescoes is a painting representing eleven personages of dignified bearing, draped in togas and carrying books and rolls of parchment.

Housing at Birmingham.

The president of the Birmingham Architectural Association, Mr. H. T. Buckland, has written to the chairman of the Birmingham Housing Committee, suggesting the advisability of the architectural profession being represented upon the advisory committee of builders' representatives set up to discuss with the Housing Committee the plans of further houses to be erected in Birmingham. He offers the services of two or three architects who would be willing to act in an honorary capacity.

Non-Ferrous Metals Research.

The second annual meeting of the British Non-Ferrous Metals Research Association has been held at Birmingham, under the presidency of Mr. T. Bolton. After giving a comprehensive survey of the activities and progress of the Association, which has now over one hundred member firms, he said that a number of important investigations were being conducted by the association in various laboratories. Among those who spoke at the meeting were Vice-Admiral Sir George Goodwin, Dr. W. Rosenhain, F.R.S., of the National Physical Laboratory, Sir Henry Fowler, Sir Frank Heath, Secretary of the Scientific and Industrial Research Department, and Sir Richard Threlfall.

Portland Cement for Dakar.

. A telegram has been received in the Department of Overseas Trade from H.M. Consul-General at Dakar, French West Africa, stating that tenders are invited to be presented to the Director, Public Works Department, Dakar, on April 14, for 600 tons of Portland cement in double casks of fifty kilograms, 300 tons deliverable quay Conakry, May 31, 300 tons quay St. Louis, July 31. Deposit of 4,000 francs required. Firms interested should communicate either direct, or through their agents, with the Director, as the essential documents will not be available in the Department of Overseas Trade in time.

Yorkshire's Rural Industries.

The question of encouraging rural industries has been discussed by the North Riding County Council. Some time ago notices were sent out to the parish councils asking for particulars as to the activity of village industries, and Alderman Colonel Godman, at the last meeting of the County Council, said that, judging from replies that had been received, local industries were dying out. The only active industries they found were at Pickering, where "besom" making was carried on. A new industry, however, is being started at Burniston, near Scarborough, for cultivating honesty, a plant having disc-like seeds, for placing in ornaments for decorative purposes.

Ernest W. Gimson Memorial Volume.

A committee has been formed to prepare and publish by subscription a memorial volume of the work of the late Ernest W. Gimson. It will contain chapters dealing with his life and work written by F. L. Griggs, W. R. Lethaby, and Alfred H. Powell, who will have the assistance of Sidney H. Barnsley and of his brother Sydney A. Gimson. There will be illustrations in the text from drawings by C. M. Gere, F. L. Griggs, and Alfred H. Powell, drawn for this work. It is proposed that the memorial volume shall

contain also about sixty photographic reproductions from Ernest Gimson's original drawings and executed work in architecture, furniture, plaster work, iron and brass work, embroidery, etc. The book, which will be priced at two guineas a copy net, will be issued from the Shakespeare Head Press, Stratford-upon-Avon.

The Lighting of Public Buildings.

At the invitation of the council of the Illuminating Engineering Society, the Council of the R.I.B.A. desire to inform their members that there will be a discussion on the subject of "The Lighting of Public Buildings" at 8 p.m. on Tuesday, March 28. The meeting will be held at the House of the Royal Society of Arts (18 John Street, Adelphi). A summary of "Experimental Work and Results" will be presented by Messrs. J. W. T. Walsh, M.A., H. Buckley, B.Sc., and E. H. Rayner, Sc.D., of the National Physical Laboratory. Captain W. J. Liberty, Public Lighting Inspector to the City of London, will deal with various "Decorative Interiors" of Town Halls, etc. Any members who would care to take part in the discussion are asked to send their names to the Secretary, R.I.B.A., as soon as possible, and all members of the Royal Institute are cordially invited to be present.

Building Exhibition Competitions

We would remind readers that only another twelve days remain for participation in our Building Exhibition Competitions, designs having to be sent in not later than Monday, March 27. This date has been fixed so that there may be time to assess the competitions before the opening of the Building Exhibition next month. During the run of the exhibition we shall publish three special issues in which we shall include reproductions of the winning and other designs. We hope also to be able to arrange an exhibition of designs on our stand.

Mr. W. G. Newton, M.C., A.R.I.B.A., President of the Architectural Association, has kindly consented to act as assessor.

The object of these competitions is twofold : (1) To show the architectural possibilities of individual stands, and (2) to show how the exhibition would gain by the adoption of an architectural plan in place of the present rather haphazard arrangement.

Fifteen prizes will be awarded as follows :—

A.—For the Stand : first, £10 ; second, £5 ; third, £2 ; and five consolation prizes of £1 each.

B.—For the Architectural Lay-out and Treatment a prize of £10, one of £5, and five consolation prizes of £1 each.

Competition A.

With regard to Competition A, it is to be assumed that the stand will occupy a floor space of 16 ft. by 20 ft.

Designs for the stand, made on a single sheet of either cartridge or tracing paper, should include plan, sections, elevations, and perspective, to ¼ in. scale, drawn preferably in pen-and-ink, though wash rendering will be admissible.

Competition B.

The plan reproduced in our issue for February 8 is of the last exhibition, and is given merely as an indication of the area to be treated. A plan true to scale was reproduced in the issue for February 22, and this should be followed by competitors in preparing their lay-out schemes. (A bird's-eye view and elevations and sections may be added if considered necessary.)

In the likely event of any firm desiring to carry out a design on some future occasion the rights of competitors remain intact, and designs will be published as copyrighted, with a note to that effect.

Readers may enter for both competitions, but they must not submit more than one design in each.

The name and address of competitors should be sent under sealed envelope addressed to the Editors, and designs should be submitted under a *nom de plume*.

Drawings marked "Exhibition Competition" should be packed flat or sent in a cardboard roll, addressed to the Editors, THE ARCHITECTS' JOURNAL, 27–29 Tothill Street, Westminster, to arrive not later than first post on Monday, March 27. They must be accompanied by the coupon which is given on page xxviii.

Full particulars of these competitions were printed in our issue for February 8.

Flood Lighting at Croydo

At the present time a great deal attention is being given to the flood lig ing of buildings, and many interesti examples are now to be seen in Lond and elsewhere. One of the lat installations, that for Messrs. Alld premises at Croydon, an illustration which appears on this page, shows admirable way in which the architectu features of the building are illuminat in this instance uniform results be obtained over the entire surface of stonework. The equipment compri six units which are mounted in a trou placed on each side of the building, a equipped with 200 watt gas-filled lam and Holophane F.150 reflectors moun horizontally. The angles and setting these were carefully calculated, with result that there is no perceptible div sity in the intensity. By changing character of their distribution cu similar results may be obtained fr greater or lesser distances. A furt point worthy of mention is the few poi necessary to achieve such results, and energy consumption, *i.e.*, 2.4 units hour, represents a very economical fig for this class of spectacular lighti The scheme was carried out by Mes J. and T. Robinson, of Croydon, electri contractors, in collaboration with Holophane Company.

FLOOD-LIGHTING OF MESSRS. ALLDER'S PREMISES, CROYDON.

Brazilian Centenary Exhibition

...e Department of Overseas Trade ...issued a prospectus for the British ...on at the forthcoming International ...bition at Rio de Janeiro, to be held ... September 7 to December 31, in ...ration of the Centenary of Brazilian ...pendence. The prospectus is being ...d to some 2,000 British firms trading ... Brazil. In view of the urgent need ...imulating our overseas trade and our ...tion of friendship with the Brazilian ...le, it is hoped that the British section ...be thoroughly representative. This ...e more necessary since our commer... rivals, such as the United States, ...ce, and Belgium, are all making ...e preparations for official participa... The Department of Overseas Trade, ...ing that under present conditions ...mber of firms may be reluctant to ...bit samples in bulk, has arranged for ...al exhibits by means of models and ...parencies, in conjunction with single ...les. A model exhibition on these ... has been constructed in the exhibi... and fairs division of the Depart...

Radiation Limited

... the annual meeting of Radiation ...ted, held at Birmingham, the chair... Mr. H. James Yates, said that they ...t be regarded as fortunate in being ... to show results for the year which, ...e circumstances were very satis...ry indeed. The coal strike which ...l some three months, was an occur...; which was bound in a special way ...fect them adversely, as it interfered ...riously with the manufacture of gas. ... that trouble was over, however, ...gas undertakings made a quick re...y, and one found in the press almost ... announcements of reductions in the ... of gas at various places. That was, ...ourse, bound to have the effect of ...asing the sale of gas throughout the ...try, and that in turn meant an in...ed demand for the company's ...ratus.

...eir object in forming Radiation, by ...ng together all the principal manu...rers of gas stoves in this country, ...o stop waste and useless expenditure, ... to provide the public with goods ...r made and more efficient. They ...fetched prices down in a way which ... not have taken place but for the ...that all the principal gas-stove firms ... united as Radiation; and they ... many thousands of pounds a year ...search and experimental work. The ...lardization of all goods as among ...various companies of Radiation was ...phill task, but they had made great ...way. When their programme in ...direction was completed, gas under...gs would be able to reduce enor...ly their stocks of parts; the cost ...aintaining stoves for the public who ... stoves from them would be con...ably reduced, and, owing to the ...otional advantages afforded by the ... of the company, the public would ... the most efficient and reliable kind ...oves, whether for cooking, heating, ...omestic hot-water supply, or those ...d types of furnaces which were re-quired in so many industrial enterprises of to-day.

The directors were glad to feel themselves in a position, notwithstanding that the profits for the past year were somewhat less than those of the previous year, to recommend a final dividend on the ordinary shares, which, with the interim dividend already paid, made 6 per cent. for the year, free of tax, as in previous years.

Latest List of New Inventions

Latest Patent Applications.

4919.—Baines, J. S.—Material for building, roofing, &c. February 20.

5531.—Brown, A. E.—Reinforced-concrete floors, roofs, &c. February 24.

5598.—Clarke, W. W.—Panels or slabs for buildings. February 25.

5354.—Crittall Manufacturing Co., Ltd. —Panelling. February 23.

5016.—Harris, J. T.—Scaffolding. February 21.

5525.—Noble, G. W. R.—Sectional vaults for interment. February 24.

5663.—Pitou, E.—Suspended scaffolds. February 25.

Specifications Published.

174087.—Brown, D.—Concrete walls and buildings.

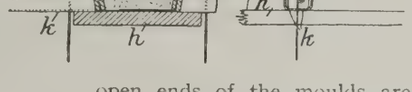
175127.—Luckett, G. G.—Means for securing bolts in stone and other materials.

175157.—Brown, R., and Slater, H. B.—Construction of ladders and the like.

175219.—Norman, G.—Concrete buildings.

Abstract Published.

173862.—Floor Centering. — E. O. Williams, 5 St. George's Road, Westminster.—Concrete floors are cast by means of channel-shaped metal moulds *g* having outwardly turned flanges *k* and resting on temporary boards *h* bolted to the joists *a*. The



open ends of the moulds are closed by precast slabs *e* which may be reinforced by expanded metal or wire netting projecting at the lower edge and overlapping under the joists. Rods *f* may project between the flanges *k* for the attachment of ceiling lathing.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

Societies and Institutions

Builders' Costs.

In reading a paper on "Analysis of Building Costs," before the Surveyors' Institution, Mr. B. Price Davies suggested that an analysis of costs would always be provocative of discussion, as they were variable, and were influenced by many unreliable factors, the human factor being by no means the least. With regard to the analysis of costs he said that they found that the second analysis threw out numerous classes of building materials for further analysis, and that the third threw out another lot and so "ad infinitum."

South Wales Architects.

At a general meeting of the South Wales Institute of Architects (Western Branch), held at Swansea, the following officers were elected for the ensuing year: Chairman, Mr. Charles S. Thomas; hon. secretary, Mr. J. Herbert Jones; hon. treasurer, and librarian, Mr. H. C. Portsmouth; committee, Messrs. Glendenning Moxham, J. Cook Rees, C. Russell Peacock, Thomas Gibb, and G. R. H. Rogers; associates' representatives, Messrs. G. L. Crocker and W. T. Lloyd. Mr. Ernest E. Morgan was elected hon. auditor.

The following were elected to the Council of the South Wales Institute of Architects: Messrs. Charles S. Thomas, H. C. Portsmouth, J. Herbert Jones, J. Cook Rees, and Glendenning Moxham; associate representative, Mr. G. L. Crocker.

Prizes were presented to the successful students in the measured drawings competition. The first prize was awarded to Mr. W. T. Lloyd for a wash-drawing of the Orangery at Margam Park. Mr. J. C. Gower was awarded second prize for a pen-and-ink drawing of the same subject, and Mr. E. A. E. Evans came third with a pen-and-ink drawing of the "Inigo Jones" Pavilion at Margam.

The Ancient Arch Under London Bridge.

The following resolution has been passed by a conference called by the Concrete Institute: "That this conference is unanimously of opinion that the ancient arch recently discovered under London Bridge should be preserved on its present site; and the conference pledges itself to use every endeavour to attain that end." The owners of the site and the architect have already been written to with a request to withhold any action tending towards the demolition of the arch, until the conference has had reasonable time in which to act. A public meeting will shortly be held, when the history of the arch, which is intimately connected with the ancient history of London from its earliest days, will be set forth; and a general discussion as to ways and means for its preservation will be held. Any public bodies interested are invited to send representatives; and the general public will also be welcomed. The date and place of the meeting will be given in due course. Representatives of the following bodies were, among many others, parties to the resolution set forth above: The London University, The Society for the Protection of Ancient Buildings, The Surveyors' Institution, The Society of Architects, The Civic Arts Association, The Selborne Society, The London Society, The Concrete Institute.

Mediæval Buildings.

At Manchester University the third of a series of lectures on the art of building, arranged jointly by the Manchester Branch of the Institute of Builders and the Manchester Society of Architects, has been delivered by Professor G. Baldwin Brown, of Edinburgh University. Taking for his subject "The Work of the Mediæval Builders," he said that all great architects must be ideal, because man required some symbol to express the stirrings and aspirations of his inner nature. Great buildings, if they were to fulfil their highest purpose, must express or adumbrate this. In the greatest architecture proportion must be conditioned by other standards than those of mere utility. From the middle of the twelfth to the middle of the thirteenth centuries there flourished a style of architecture of marked originality of character which in the central districts of France inspired some of the highest achievements in the art of building that the world had ever seen.

Evil Influence in Bad Architecture.

Lecturing at the Dublin Metropolitan School of Art on "Modern Architecture," Mr. Conor O'Brien said that if the majority of people disliked a picture or a symphony it was not necessarily bad art—they could avoid being offended, by keeping away. But if a building jarred on the majority of people, it was bad architecture, because it had an evil influence from which one could not keep away. In the interests of the whole community architecture must be restrained by some laws—call it good taste or call it tradition—and in all Free States it always was so restrained, sometimes very harshly. But in Ireland, because it was not a Free State, this restraint had not been observed. In all typically Irish buildings the wall was the first consideration : it was kept quite flat, and carving and moulding were subordinated to it. It might be differentiated at the base only by battering, richer treatment, or variety of material. It was pierced for doors and windows in such a way that the arrangement of opening was more considered than the form of the opening. To him the positive qualities of our architecture were breadth, horizontality, and symmetry. He did not think the observance of these laws hampered the artist ; rather the reverse.

Metal Windows

In an extremely interesting book just issued by the Crittall Manufacturing Company, Ltd., of Braintree, a very successful attempt has been made to classify the window into its various uses, and to set forth the advantages to be secured by the installation of metal windows. After referring to the several points which have to be observed to attain the perfect window the company give a great deal of useful information, appropriately illustrated, with regard to the various types—the home, leaded, cottage, French, office, factory, shop, hospital, and the school window, and bronze windows and doors.

Metal casements can be made to suit any architectural effect, with or without panes, with wide or narrow frames, and with every variety of ventilation. For small houses, artisans' dwellings, bungalows, or cottages, a special range of windows has been designed of standardized sizes to cover every possible requirement. Th are delivered complete with all fasten cleaning hinges, and curtain-rod brack Being already painted two coats, th only require one coat of paint after gl ing. For office lighting the windows m be made to any size and may be made conform to any architectural effect the use of surrounding mouldings or dividing the openings into smaller pan

For large factories, store buildin laundries, garages or outhouses, stand "Fenestra" windows, surrounded by j sufficient masonry and steel framing support them, have been found, it is sa to be a very satisfactory form of walli Walls of daylight, based on a 12 in. 18 in. glass pane, and with conveni varieties of ventilating panes, are p duced in a range of standard sizes.

Ease of cleaning is, of course, primary consideration in every detai construction of windows intended for wards or operating rooms of hospitals sanatoria, and it is common knowle that there must be no superfluous mou ings or corners to provide a poten lodgment of germ-bearing dust. To m these very necessary requirements m windows having rounded corners and ot special features have been devised. M windows are particularly suitable school buildings, as not only are their areas available for ventilation, but s refinements as draught deflectors or cheeks can be embodied to give the pro regulation of air currents.

The book is very tastefully produ and avoids the use of all technicali Besides being of interest to the archi the book should be of great assistanc educating the lay mind in the use metal windows.

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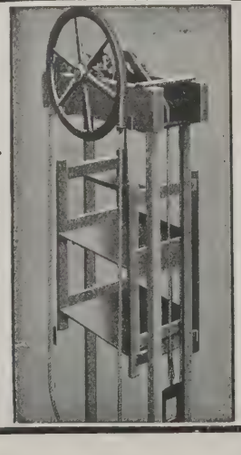

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THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

MEMORIAL FOR BUSHEY, HERTS. W. REID DICK, A.R.A., SCULPTOR.

27-29 Tothill Street, Westminster, S.W.1.

Architectural Details. 18.—Main Chancel Screen, All Saints, Clifton

George Edmund Street, Architect

The church of All Saints, Clifton, is rich in Street's ironwork, of which the main chancel screen is an exceptionally delicate and delightful example. Street executed an immense amount of ironwork, which is to be found all over the country. As the writer of our article says, his designs "have the quality of being alive."

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

dnesday, March 22, 1922 Volume LV. No. 1420

Building for Prosperity

BY this time we should be in the midst of the most tremendous building boom the world has ever seen, yet the building industry is slack. The boom is but postponed. The merchant, the trader, trading or the municipal corporation, are all eager to ld, or, at least, to repair. What restrains them?

hey are all waiting for prices to go down. Have they er contemplated the not remote possibility of prices in going up? Have business men no experience of the nomena of fall and rebound—of the "sharp rise" iliar on the Stock Exchange as the corollary of reaching drock"?

lave building prices, then, reached bedrock? Who ll say? We are not concerned to deny the possibility a further decline, but is there no longer any virtue in adage that time is money?

hat hope of an ultimate saving through waiting may sibly be disappointed after all. For supposing everyly presently feels that we have indeed touched bottom es in building: what will be the immediate and intable consequence? Why, of course, a tremendous rush come in on the lowest terms. As a natural result, there l be immediate reaction—a swift and sudden rise of es to a point considerably higher than that to which have gradually come down to-day.

But the stress will be much beyond normal for other sons than the sudden opening of the sluice-gates. The in stream will be augmented by tributary currents. tain extensive public and semi-public works will make normal demands on the building industry, will tax to utmost its resources in men and materials. Olympia to be extended by an addition amounting to about -half of its present capacity, or one-third of the whole the completed building. The British Empire Exhibition arantee fund has already reached a million sterling, of ich the Government has guaranteed a hundred thoud pounds; many schemes for new schools, new churches l chapels, new institution buildings of every type, new atres and cinemas, are reported from all parts of the ntry, betokening high tide and high pressure in the lding industry at no distant date. And all the housing emes are not yet obsolete. They are still absorbing ich labour and material. Assuredly prices will not then down, and those building-owners will be wise who "come before the crush commences." That means—Build now. not wait for prices to drop to some preconceived but blematical point which they may never reach, or, ching it, may swiftly rebound. Build at once, while the rk can be done, not so cheaply as one could wish, perps, but at prices which are by no means prohibitive, and y even rise instead of going down.

Humane firms of building contractors, having in the k period kept their staffs together at a loss, would sumably accept contracts now on far more advantageous ms than the building owner is likely to obtain when siness is booming, and the conscientious contractor must ds keep a waiting list and serve the would-be building ners duly in turn.

It is not to be supposed that, as some despondent architects have incontinently assumed, everybody has lost "the building habit," still less the building instinct, which is every bit as strong in men as in birds. It is not wise to wait until there are less exorbitant public demands on one's income. Is taxation likely to fall much below high-water mark while about two millions and a half sterling is being given away in out-of-work doles? Speaking the other day on the prospects of trade revival, Mr. Baldwin, President of the Board of Trade, "declared his belief that we had reached bottom, though it would be some months yet before we should see anything that could be called a trade revival." Sound advice to the hesitating prospective building client would be, Do not wait until the trade revival comes round full cycle. Help it along. If you have building or repairs to be done, let them be done now, in advance of the coming rush. Help to revive trade prosperity, and, in reducing the appalling numbers of the unemployed, help to reduce the heavy taxation that is crippling business enterprise.

This advice, which we sincerely believe to be sound and useful, we offer less in the interest of the building industry than in that of national prosperity in general, because enterprise in building is an essential accompaniment of progress—may precede and promote it, or may lag behind and retard it. Apparently it is now lagging and retarding. Will not the great lay Press lend its powerful voice in proclaiming this message, in helping the public to a clearer perception of the moral and material advantages of timely and courageous building?

The Housing Question in the House

Housing is not yet a dead issue. The debate on it in the House of Commons last week gave Sir Alfred Mond a lively time. On the House going into Committee of Supply, Mr. J. R. Clynes moved a reduction in the vote for the Ministry of Health, his object being to call attention once more to the everlasting housing question. The ensuing discussion did not greatly increase the sum total of knowledge on this baffling problem. We knew already that the State had some time ago (for electioneering purposes) proclaimed the urgent need for five hundred thousand new houses, and that now it talks of only a hundred and seventy-six thousand; knew also that, as Viscountess Astor urged in a rousing housing speech, the Government ought at least to keep its promises with respect to a progressive housing programme; and nothing new was to be gleaned from Sir F. Banbury's casual remarks on interference with private enterprise, and on "People's Budgets, and other foolish things of that sort"—these "foolish things" being, *bien entendu*, responsible for the shortage of houses. Sir Alfred Mond, replying, declared that "no local authority had been stopped, on financial grounds, from building houses under the Government subsidy scheme. He tried hard to extricate the Government from the promise to build five hundred thousand houses. True, the Government had recognized "that there was a shortage and need of five hundred thousand houses, but there was nothing

pledging the Government to build that number of houses regardless of the cost or the condition of the national finances." Strange how these unfounded rumours get about, and require so much explaining away! We trust that this passage from Sir Alfred's speech may not presently have to undergo a similar operation: "Not many months ago an expert told him he would never get a cottage built for less than £600. Nevertheless the price had fallen to £400, and though he did not think the price would get down to the pre-war figure, he believed it would get rather close to it." Certainly, even the lower figure seems a long price to pay for the primitive huts that one instinctively associates with State-aided housing schemes, the order being to build not as well as possible, but as cheaply as possible—and even cheaper than that, if the building be confined to paper or to political speech-making!

The Engineering and Building Troubles

At the present moment of writing, there is nothing definite to record about either the dispute in the engineering trade or the repeatedly adjourned negotiations of the London builders concerning alterations in working conditions. By the time these lines are printed, both affairs will, we trust, have been satisfactorily arranged; for it would be indeed deplorable if, at the very instant when trade had taken a turn for the better, such untoward incidents as simultaneous disputes in the two largest and most important industries in the kingdom should give it a relapse that might prove very dangerous. We are hoping that an amicable spirit may have prevailed to avert what would be, in either industry, an untoward calamity.

[P.S.—We are glad to record that on Friday night a provisional settlement was reached by the National Wages and Conditions Council for the Building Industry. The wages reductions and working conditions to which the workmen agreed will be found on a later page.]

Art and the L.C.C. Hall

Lord Burnham, speaking at the banquet, last week, of the Royal Institute of Painters in Water-colours, dropped a timely hint about the London County Hall. No plan, he reminded us, has yet been made for its artistic adornment. The new hall, as he said, provides a rare opportunity for the encouragement of the fine arts. Will the burgesses seize it? "In many cities," he remarked, "a real effort had been made to provide the city hall with decoration worthy of their architecture and not unworthy of the country." The implication is obvious. London's County Hall ought to be a supreme example of the art of the decorator applied to a civic building of the first-class in the most important city in the world. It is to be feared, however, that to the average London County Councillor, freshly returned by electors deaf to every call but that of "Economy," Decorative Art is foolishness. Truly there is grave need of Municipal Reform, but of another kind than that which is best calculated to catch votes; we do not despair of its ultimate pervasion of the Council Chamber.

Unfortunate Chicago

Chicago clings to its uneviable reputation as an unrivalled fire-centre. By the great fire which raged there on March 15, property was destroyed to an extent variously estimated at two millions and four millions sterling, while unhappily a fireman was killed and ten other firemen were injured. After the historical fire of 1871, by which Chicago was completely reduced to ashes, the city was rebuilt on fire-resisting principles. Nevertheless, on the present occasion, the fire, aided by a high wind, spread with appalling rapidity from building to building until the whole block of fourteen buildings in Van Buren Street, Clinton Street, and on the West Jackson Boulevard, was laid in ruins. Two ten-story buildings were wrecked, and the finest and most recent building in the city—that which housed the offices of the Chicago, Burlington, and Quincy Railroad—was quickly reduced to a skeleton when the flames at length got hold of it after it had "for some time" resisted the Ultimately its twenty-first story caught fire, and the flam rapidly spread downwards, gutting the entire buildir It will be observed that this "skyscraper" was to a gre extent fire-resisting, for we read that "for some time" blocked the northward progress of the flames. It was doubt this high degree of fire-resistance that prevent the complete destruction of the city as it was accomplish in the fire of 1871. Yet the utmost claim that can be ma for any building, anywhere, is that it can be made uni flammable; but any building that is loaded up with infla mable documents, wooden furniture, and woodwo "trim," as the Americans call it, speedily becomes a ragi furnace when the contents are "well alight." Hence t futility of arguing that the increased fire hazards attendi greater height in London buildings can be completely d counted "now that fire-resisting construction has be perfected." It was great height that sealed the doom the Chicago buildings. It seems obvious that the firem could not properly reach the flames to subdue them in a single building, nor to prevent their spreading from o building to another. This disastrous fire at Chicago w not help the advocates of tall buildings for London.

Our Building Exhibition Competitions

Intending competitors who have not already sent their designs are reminded that out competitions close March 27. All entries should arrive at our address by t first post on that date. Particulars of the competition, which prizes are offered for (1) a design for an Exhibiti Stand, and (2) for a design for the Architectural Lay-c and Treatment of a Building Exhibition held in Olymp were given in our issue of February 15, and in the JOURN for February 22 a double-page plate gave a scaled plan Olympia for guidance in preparing designs. As these co petitions afford so excellent an opportunity for showing t application of architectural art to commercial services, anticipate a large entry of interesting and useful designs.

Advertising Enterprise

We would say no single word against legitimate advert ing enterprise. It would seem, however, that certain p posals recently laid before the Works Committee of t Westminster City Council, and by them rejected, hard justify the adjective in the phrase we have used. Th different firms have approached the Council, each w a different proposal. One firm wants to lay "throughd the world" paving elements that bear advertisements. second wishes to erect advertising signs on the public lig ing standards. (Specimens of these signs are alrea attached to a lamp-standard in Oxford Street.) A th enterprising firm wishes to put up "combined adverti ments and street signs." No more need be said than t we can trust Westminster City Council to keep firm in resolve to preserve us from these horrors, and there shame the Postmaster-General, who by disfiguring all "advertising space" he can command, has set the rest the traders (for he is the chief of sinners of that sort shocking example of blatant publicity.

The Rome Prize Controversy

The further correspondence which appears in this is on the subject of the British Prix de Rome reveals a fresh points of interest. The complaint from Scotla that the necessity for travelling to London for the "en lo competitions imposes an unfair financial burden u students, and debars many from competing, is one t should receive sympathetic consideration. If the "en lo cannot be held in some venue more central than Londo might perhaps be possible to devise some means of afford those competitors who need it the necessary finan assistance. The suggestion of another correspondent t Rome is not the most suitable place for the tenability the scholarship raises a much wider issue. His alterna proposal is one that should receive the serious considera of the Faculty.

The Ironwork of G. E. Street

G. E. STREET died in 1881, and forty years is a considerable period in the history of modern design, which has changed, insensibly perhaps, but rapidly, during that time. Metal work, in the e of screens and enclosures, seems for some time past to e drawn its inspiration from Spanish "Rejas," and to e been developing on lines which bear a general relation- to them.

treet, who, after Richard Ford, was a pioneer in the loration of Spain—for Borrow may be ignored in this nection—and little less than the discoverer of its Gothic was naturally familiar with "Rejas," had great sym- hy with the choral arrangement in which they originated, expressed his admiration of them in his book; but, ngely enough, his work shows that his admiration for m stopped short of any desire to imitate them, or even se them as a basis for experiments.

he ironwork of the architects of the Gothic Revival was lly gawky in its early days, all arms and legs. There s no apparent search for beauty of line; subtlety and nement were neither an end in themselves, nor even the ans to an end, which, judged by the effects arrived at, s the assertion in a crude form of a direct antagonism to cultured spirit of Classicism. To this flouting of the tastes their elders by youthful designers Street, at the com- ncement of his career, lent himself as whole-heartedly any of his contemporaries, and it is likely that at the e of his Spanish visits he was still not fully reconciled the superior claims of grace and beauty over truculent -assertion.

he illustrations which accompany these brief notes deal, it is hardly necessary to say, with work of a maturer ge, that at the Courts of Justice belonging indeed to the last years of Street's life. He had a natural eye for satisfying curves; all his ironwork in its degree attests it, and he was able to attain variety without having recourse to quips and cranks. He moved within the ring-fence of Gothic pure and undefiled, without the inclination or the need to set foot outside of it.

Cast iron, one is obliged to say, was anathema to him. He saw a great deal of it on his daily walks, and it was generally mean and vulgar; this, perhaps, inclined him to turn a blind eye to the good. He might be brought to admit merit here and there, but it was not the kind of merit he cared to look for. It almost seemed as if he discerned a moral delinquency in the act of casting. The truth is that he belonged heart and soul to the Gothic revival to the day of his death. It was a pity, maybe, that he had not a wider vision, but his attitude was bound up with the moral nature of the man as strongly as with his artistic preferences.

The natural corollary of his distaste for cast iron was that he reprobated everything flat, unvarying, and textureless—the type of hinge, for instance, which, whether cast or wrought, looks as if it had been stamped out—mere outlines with no gradations, no colour, no evidence of interest in its creator. Sections meant a great deal to him, and, this being so, his hinges came to be full of life. They vary in surface, carry light and shade, and diminish gradually to their extremities not only in elevation, but in section. That endowed them with an interest apart from any grace of outline they might possess, an interest, however, which, divorced from the more direct appeal to the eye, is comparatively trivial. The two features must be used in combination to produce their full effect. This is what Street always aimed at. He never let any of his ironwork,

1. NORTH DOOR, CORSHAM CHURCH, WILTS.

2. SOUTH DOOR, YATTON CHURCH, SOMERSET

however simple, be "taken as read." There was always a problem, however insignificant it might be, and he set himself to solve it. The result was an artistic product, and not an article of manufacture. The examples from Corsham (Fig. 1) and from Yatton (Fig. 2) illustrate this. They are simple, mostly, and straightforward, but they have the quality of being alive, particularly in the perspective view. It is intelligible that the man who made this sort of result his aim should be out of sympathy with the comparative inertia of commonplace work in cast metal.

Ten or twelve years cover everything shown here, and Street's style was mature before the date of the earliest. There is nothing like any vital modification from the first to the last, only that the play of fancy seems to become more free, the ease of self-expression more assured, with the passage of time. The work at the Courts of Justice, to which this is specially applicable, dates from the very end of the 'seventies. The screens at All Saints, Clifton (see the Plates), are ten or twelve years, that at St. John the Divine, Kennington (Fig. 5), five or six years earlier.

These few years, unless one is mistaken, tell their tale, as exemplified by the railings to the balconies in the various courts at the Courts of Justice, no two of which are alike in design, all simple and hardly one dull, the effect having apparently been obtained without effort. Of the examples given here, that in King's Bench Court II (page 429) seems particularly happy; nor is the side gate into the central hall (Fig. 3), or the larger one on the Strand front (Fig. 4), in which the constructional feature is turned to such good account, inferior in quality.

Street did an immense quantity of ironwork, scattered here and there about the country; the designs reproduced are fairly representative, but their selection was determined by their accessibility rather than by consideration of their relative artistic value. They must not, therefore, be taken as representing the high-water mark of their author's capacity, if such a thing, where individual judgment is so much a matter of taste, were actually ascertainable.

A. E. S.

[It may be recalled that George Edmund Street was born at Woodford, Essex, in 1824, and received his education at Mitcham and at the Camberwell Collegiate School. In 1841 he was articled to Owen Browne Carter, of Winchester, subsequently worked, for five years, in the office of Scott and Moffatt, and in 1849 commenced independent practic In 1867 he entered the competition for the Law Courts the Strand, and in the following year was appointed arc tect for the work, which was still unfinished at the time his death. In 1874 he was awarded the gold medal of t R.I.B.A., and four years later, in recognition of his drawin sent to the Paris Exhibition, received the Knighthood the Legion of Honour. He was appointed Professor Architecture at the Royal Academy, and elected Preside of the R.I.B.A. in 1881, the last year of his life. Stre won his highest artistic successes as an ecclesiastic architect.]

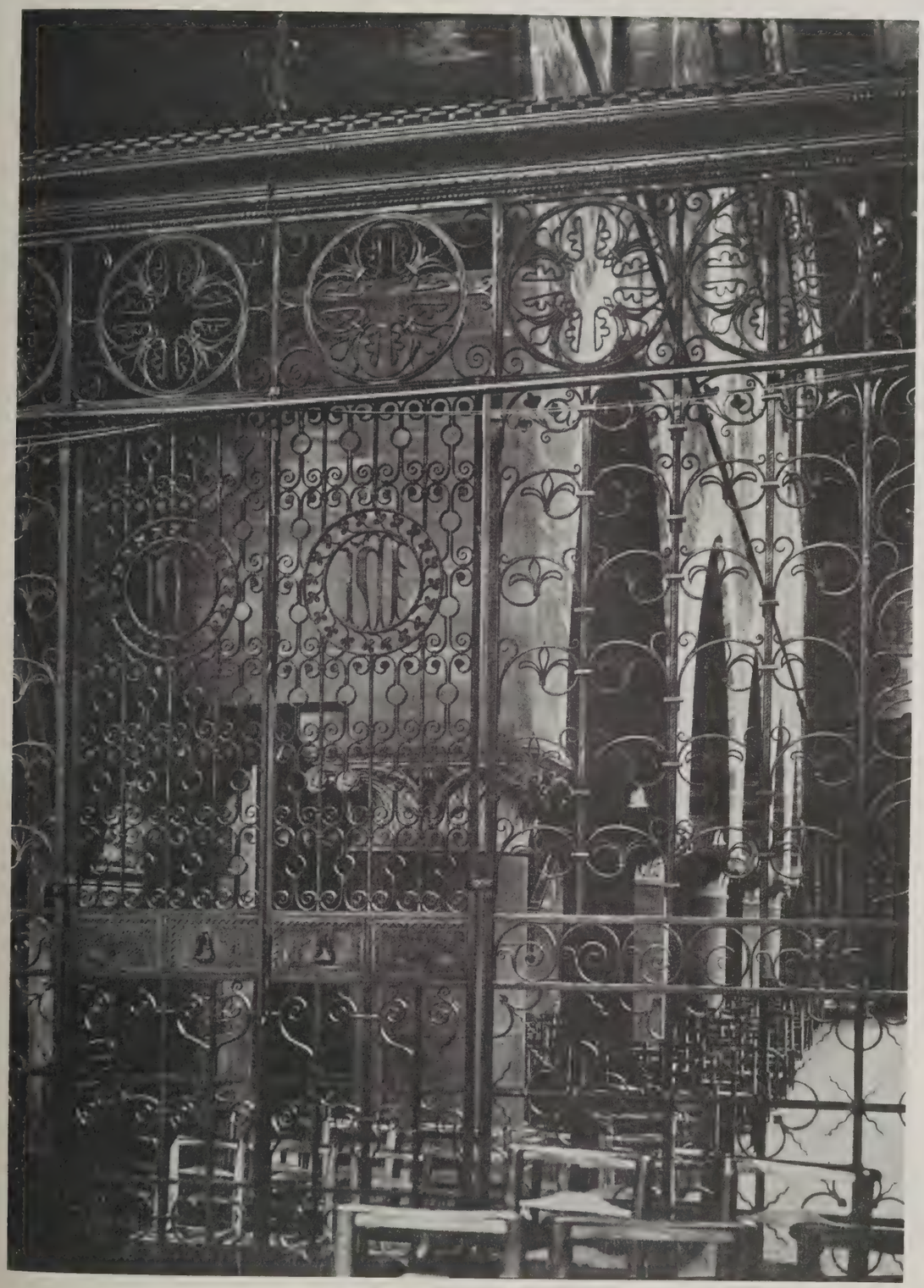
3. THE LAW COURTS: EAST SIDE OF THE CENTRAL HALL

4. THE LAW COURTS: SIDE GATE ON THE STRAND.

5. SOUTH SCREEN OF CHANCEL, CHURCH OF ST. JOHN THE DIVINE, KENNINGTON.

Architectural Details. 19.—Wrought-Iron Screen in South Chancel Chapel, All Saints, Clifton

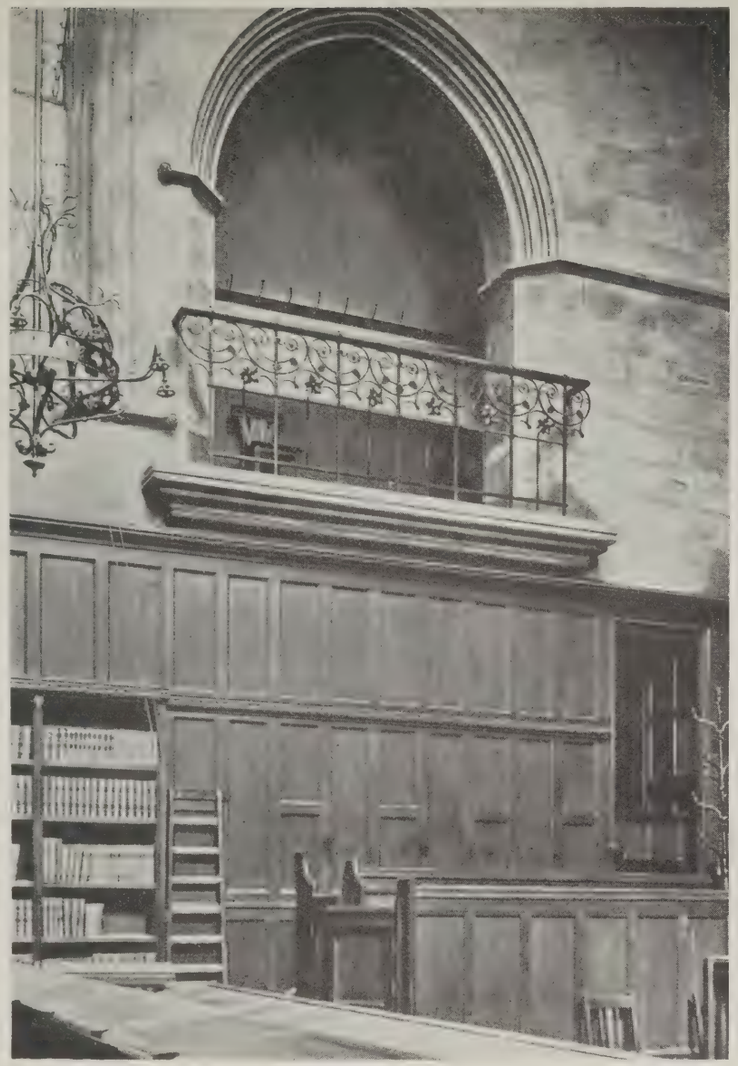
George Edmund Street, Architect



This illustration of a Screen in All Saints, Clifton, displays Street's enjoyment of subtle lines and natural growing curves. In designing ironwork he was particularly happy. He never allowed any mechanical or machine-made effects, but attacked each problem from an original point of view. Originality, indeed, is one of Street's chief attributes.

Ironwork in the Law Courts

Designed by George Edmund Street



In King's Bench Court No. 2.

In Chancery Court No. 1.

The Scottish Survey

The first of the volumes of "The National Art Survey of Scotland" has been completed, and leaves one waiting impatiently for the publication of the further parts.

The present volume contains four parts, in a portfolio, given up with but one exception—Torpichen Priory Church—to stone-built domestic work of the baronial class. The photographs are excellent, and excellently reproduced, as are also the measured drawings and sketches.

The example given is of Caroline Park House, or Royston House, as it was formerly called, situated about three miles north-west of Edinburgh, near Granton Harbour.

The house as it now stands forms a square built round a courtyard, and dates from the seventeenth century, the date 1685 being inscribed upon the stone panel on the north front. There is, however, quite good ground for believing that the original part of the south side belongs to an earlier date than the rest of the mansion, as indicated by the thicker walls. The earlier work has evidently been adapted to the later plan, the older part of the south front having been extended by a tower at either end, and entirely refaced with ashlar, thus completely changing the character of its design. The two added towers have bold and high ogee roofs, the slightly projecting centre part of the main front having a similar quaint feature. There is in this central feature an interesting dormer window with the date 1696.

Along the frieze of the south front of the two towers, inscribed in raised uncial capitals, are the names of the lord and lady of the place—on the east tower "George Viscount Tarbat," of the family of Mackenzie of Tarbat in Ross-shire, and on the west tower "Anne Viscountess Tarbat," a daughter of Sir James Sinclair of Mey, Bart. Behind these respective towers would probably be grouped what may be regarded more or less as the male and female sides of the house. Thus, behind "My Lady's" tower, we find in the west wing the vaulted kitchen with its usual offices and passages. There is, by the way, in this passage, near the service stairs, indications of a very interesting and early example of a household lift to the floor above. Then we have the east wing behind the viscount's tower, "My Lord's" suite of private rooms on the first floor, having a private stair to a "speak-a-word room" on the ground floor, with its outside door, all features indicating this side as containing the viscount's personal apartments.

At the time of the remodelling of the south front, the main entrance was constructed here, the doorway being in the centre under a slight timber porch, evidently constructed to serve also the purpose of a balcony for the centre room of the principal floor. At the ingoing of the new front doorway can be seen the mouldings and the curved lintel of the older garden entrance doorway.

The original principal entrance to the house appears to have been on the north side facing the Firth of Forth. We need not be surprised if, after a trial of this, his lordship turned to the sunny side and built projecting towers east and west to screen the entrance from the winds. The north elevation still retains its simple original features of a plain straight wall, with a moulded doorway in the centre, with one window only opening on the ground floor, and with seven windows in the upper floor, equally spaced, and with simple back fillets round each.

The times are hard, and like many another fine place, Caroline Park House has occupants of a different degree. It is now used as offices by a firm of printing-ink manufacturers.

"National Art Survey of Scotland." Volume I Examples of Scottish Architecture from the Twelfth to the Seventeenth Centuries. A series of reproductions from the National Art Survey drawings, published by a Joint Committee of the Board of Trustees for the National Galleries of Scotland and the Institute of Scottish Architects. Edited by Sir R. Rowand Anderson, LL.D., H.R.S.A., Thomas Ross, L.L.D., and W. T. Oldrieve, H.R.S.A. Folio. Loose plates in case. George Waterston and Sons, Ltd., Edinburgh and London. 1921.

The Cardiff Conferen

The programme arranged by the So Wales Institute of Architects in con tion with the R.I.B.A. Conference Cardiff, June 8, 9, and 10, is as follows

Thursday evening, June 8 (8.30 *p.m.*

Reception by the Lord Mayor of Ca (Councillor F. H. Turnbull) at the Hall.

An exhibition of prints and ph graphs of Cardiff, old and new, will on view.

Friday morning, June 9 (10.30 *a.m.* 11.30 *a.m.*).

Paper by Major Harry Barnes, M F.R.I.B.A., on "Unification and gistration."

(11.45 *a.m. to* 1.0 *p.m.*).

Visit to City Hall and Law Co Cathays Park.

Friday afternoon (2.30 *p.m. to* 5.0 *p.*

Visits to Welsh National Museum Glamorgan County Hall.

Friday evening (7.0 *p.m. for* 7.30 *p.*

R.I.B.A. Banquet.

Saturday morning, June 10 (10.0 *a.m* 11.15 *a.m.*).

Paper by Mr. H. T. Buckl F.R.I.B.A., President of the Birmingh Architectural Association, on "Civic A tecture and Advisory Art Committees

(11.15 *a.m. to* 12.30 *p.m.*).

Paper by Mr. Percy Thomas, O.B F.R.I.B.A., President of the South W Institute of Architects on "Problem Practice."

Saturday afternoon (2.0 *p.m. to* 6.0 *p.*

Visit to Cardiff Castle and grounds (4.0 *p.m.*).

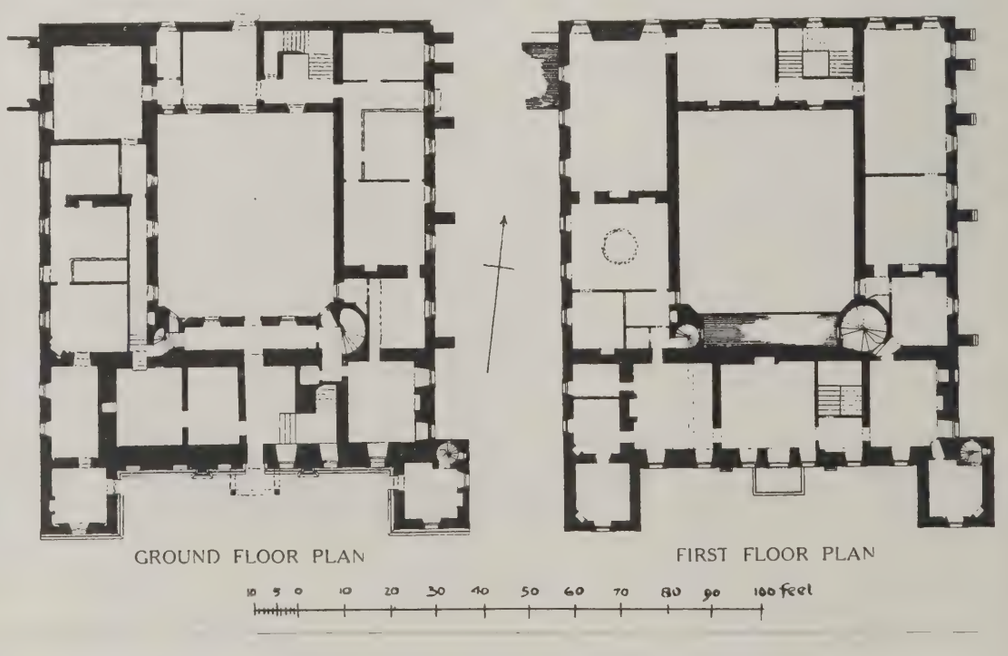
Tea in the Castle grounds by invitation of the Marquis of Bute.

Saturday night (8.0 *p.m.*).

Smoking concert.

Sunday, June 11.

Arrangements are in hand for a ch banc tour to Tintern Abbey and the Valley for those members who sta Cardiff over the week-end.



PLAN OF CAROLINE PARK HOUSE

Caroline Park House, Edinburgh

From "The National Art Survey of Scotland"

Caroline Park House is situated about three miles north-west of Edinburgh, near Granton Harbour. It is built around a courtyard, and the date, 1685, is inscribed on the stone panel on the north front. It is supposed, however, that the original part of the south front, which is shown above, belongs to an earlier date, the pavilions at either end having been added later. Each pavilion has an amazing ogee roof which is repeated above the picturesque dormer in the centre. The dormer plays an important part in the design of this façade, and together with the ogee roofs gives the building its unique appearance

Architectural Details. 20.—Caroline Park House, Edinburgh : Plaster Ceiling in North-West Room

From "The National Art Survey of Scotland."

Ceilings of elaborate hand-wrought plasterwork are to be found in the state rooms of this house. Two of them have panels decorated with oil-paintings, signed "H. Heyde, Inventor." Heyde was an assistant to Antonio Verrio, an Italian painter who did work for Charles II at Windsor and Hampton Court amongst other places. The above illustration shows one of Heyde's panels. The walls of the room are wood-panelled.

Correspondence

What is Wrong with the British Prix de Rome?

) the Editors of THE ARCHITECTS' JOURNAL.

s,—I think I ought perhaps to make comment on the little discussion you have been fathering on the subject, and that is, though it will ubt be obvious to your readers, that has been no expression of the l views of the Architectural Asso- n. If and when the Council wishes ve expression to its views on the ct it will get into communication ly with the authorities concerned e administration of the competition. uld be obliged if you would print letter, to prevent any misunder- ing that possibly may arise.

WILLIAM G. NEWTON,
President.

o the Editors of THE ARCHITECTS' JOURNAL.

:s,—May I add one other criticism ıose in the correspondence on the Prize; one that applies more or o all schools in Scotland, and espe- to this school. That is, the cost ı a student has to bear in going up ondon for the second "en loge" etition.

ind that there are some students who would enter, but who are red by the cost which they would if they were admitted to the final etition. The railway fare alone from deen to London is £6 12s. 6d., a y item for a student of limited means. ɔuld it not be possible to have the "en loge" competition in some more al place, or in two places—say, on and Edinburgh?

ere is much in Mr. Atkinson's state- regarding the strenuous courses in chools leaving insufficient time for nts attending them to carry out the required while the school is in ɔn.

R. LESLIE ROLLO.
School of Architecture, Aberdeen.

'o the Editors of THE ARCHITECTS' JOURNAL.

:s,—The reference made in your r in your issue for March 8 is a er of some concern to the architec- student in the country generally, :o Liverpool in particular.

would appear that there is little that ong with the British Prix de Rome etition, and it is only the apathy n by the London schools, and the of enterprise, and initiative of their ers, that can account for such a ion being asked.

the Preliminary Competition in pool was held under the auspices of iverpool Architectural Society, I was to appreciate the enthusiasm of the nts, and the knowledge displayed in reparation of their drawings. This ısiasm ran so high at the last days e competition that many stayed at all night so as not to be parted from desire to win so great a prize.

Even the old practised hand cannot be blind to the necessity of competition, however much he may dislike it. It is the life blood in the young man's veins and the means by which so many of our now eminent men have risen to the top to breathe the beautiful fresh air of prosperity.

The first care of our schools should be the cultivation of this spirit of competition whilst the student is young and enthusiastic, and later years will provide the practical detail, and the business side, so necessary to the complete architect.

There is nothing wrong with the British Prix De Rome, the only thing that is wrong is lack of enterprise in the London schools.

GILBERT FRASER, F.R.I.B.A.,
President, Liverpool Architectural Society.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The whole profession must welcome the discussion which you have raised on the matter of the British Prix de Rome; and not only the architectural profession, but painters, sculptors, and engravers, who have not our advantages of a professional press.

As the whole question is one which primarily affects the student and the young men of the profession, I hope that you will think it pertinent to hear what a student has to say on the matter.

When one speaks of the British Prix de Rome one thinks of the great French prototype, and as all values in our minds must be comparative, we have unconsciously set up the standard of the French prize. We have taken the most important of our British art scholarships; we have given it a French name, and have set it up beside the great French standard; and beside that, it seems wanting.

In France the Grand Prix de Rome is a national matter; in England it is a professional matter. In France it has over two hundred years behind it; in England it has but ten.

We have done wisely in basing our scholarship on the French model, but we haven't gone far enough.

In France the Grand Prix is a matter of interest to everybody; is it in England? In France the Grand Prix is one of the great events of the year; almost as important, say, as the Derby is in England. The competition is keen, and the whole of the educated class of France are interested in the results. Men are content to try for it again and again. A man will approach the goal step by step, and it has often happened that a man has only carried off the prize after having been placed third, and then subsequently second. A man does not enter for the Grand Prix with any reasonable chance of success before he has carried off one or two of the lesser prizes. When a Frenchman enters for the prize it is considered that he enters not only for himself, but also for the atelier in which he works. If he is lucky enough to be in the final the work on the finished drawings becomes a concerted effort of the atelier, under the guidance of the candidate. The "Patron" of the atelier for whom the candidate normally works takes the keenest interest in the whole thing, for, naturally, the glory of a winner reflects on him. You see, Sirs, there is greater co-operation in this team work, which makes for *esprit de corps*, and develops that necessary quality of control in the young architect. The design still remains the candidate's, for his merit is judged more by the rough "esquisse," which he did "en loge," than by the highly finished rendered drawings, which are so familiar to us in illustrations. The prize, when won, takes the scholar to an institution which was founded in 1666. On his return he is not forgotten; he is, broadly speaking, made for life. The architect of the Louvre, and the architect of Versailles, for instance,—much honoured posts—are Grand Prix men. When I was over in Paris during the last summer vacation I had a conversation on this subject with Mr. Bartle-Cox—and I have to thank him for the illuminating way in which he discovered Paris for me. He told me much of what I have here written, and apropos of our conversation, he produced an ordinary visiting card of a man who had lately called on him. directly beneath the name were inscribed the words "Third Prix de Rome." This, Sirs, may appear ostentatious to us, but it is some indication of what the matter stands for in French minds.

In Britain the position is very different. Students do not belittle the British prize. They are the people who perhaps honour it most. There is certainly room for improvement in the conditions and in the assessment of the award, but I am sure that the teaching staff would waive their objections, and the school work would give place, if the scholarship was of greater standing.

That is the trouble. The scholarship is not known and honoured among us as a nation. If I may presume further, I would suggest, as our teachers have already suggested in your columns:—

(*a*) That less work should be necessary during the preliminary rounds of the competition.

(*b*) That the board of assessors should be more representative of schools and what the modern schools stand for.

(*c*) That entrance for the scholarship should be encouraged not only among students of schools, but among the young men of the profession generally, especially the young men who have passed out. In this respect we may draw an example from France, and hope that our senior architects will encourage the young men employed in their offices to enter and to help them as far as possible.

(*d*) That every effort should be made to give greater publicity to the scholarship. That the press of the country should be induced to publish the detailed results of each round of the competition together with the full report of the assessors.

(*e*) That the marking on the finalists should be made known.

Further, I would raise the question as to whether Rome is the most desirable place for the tenabilty of the scholarship. The idea of sending students to Rome is a very old one, and it has all the weight and glamour of tradition. But students were originally sent to Rome because Italy was the proper field for research in classical knowledge and forms. Has not the position entirely changed? Is there much left that has not been drawn, studied or "restored"; and are there not such things as museums, photographs, and countless books at hand in England? Moreover, the British School at Rome is not a school in the ordinary sense of the word, and although the student is in daily touch with such eminent archæologists as Dr. Ashby and Mrs. Strong, there are no lectures.

I raise the question in the knowledge that it has already been raised in France. There it has been suggested that the French student should spend a year in Italy, a year in England, and a year in America. Following upon that, would it not be more advantageous if the British student could spend a year in Italy, a year in France, and a year in America?

Yours faithfully,

"LONDON UNIVERSITY."

University College, Gower Street.

Registration and Unification

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Keen states that the recent special general meeting at the Institute was "called at short notice, and with no proper case laid before the members in advance."

The meeting was requisitioned by the general body in the only possible way, under By-law 65; it was "called" by the Council, and if called at short notice it was not the fault of the League; but please note I am not complaining, for I understand the Council gave as long notice as possible.

Now as to Mr. Keen's statement that the members of the Institute had no proper case laid before them in advance. Surely Mr. Keen must know that the views of the Unification and Registration Committee have received the greatest possible publicity, that they formed the subject of the late President's address at the Liverpool Congress, that he himself spoke at that meeting, that he has written many letters to the press, that our President has visited certain provincial centres and spoken in support of those views, and that various London men have stumped the country with the same object! Come, come, Mr. Keen, you are not doing your own side justice.

The position at the present time is apparently this: The Council say, "We have accepted the basic principle of admitting members to the Institute without examination, and before the passing of a Registration Act; but until you have details of our scheme, and we tell you how it will be done, you ought not to object." This reminds me of the polite lunatic who says: "Good morning, sir, I am going to murder you. I am not sure if I shall poison you or shoot you, but until you know how I am going to do it, it would be a most ungentlemanly thing for you to object."

SYDNEY PERKS.

Mr. Sydney Perks, F.R.I.B.A., has received the following letter from Mr. Frank W. Simon:—

Dear Mr. Perks,—Please add my name to the R.I.B.A. Defence League. I believe in neither Unification nor Registration. The latter, I am sure, will never be granted. Engineers, large firms of architectural decorators, perhaps even builders, will oppose it. And why not? With their knowledge and experience they can do just as good work as 50 per cent. of practising architects, and how can Parliament be reasonably asked to deprive the public of the architectural services of these people?—for I take it one of the objects of Unification and Registration is to keep our ain fish gats for our ain sea maw.

I cannot see that the standard of architecture will be raised thereby. This can only be achieved by a more sensitive artistic conscience and desire on the part of the individual architect to spare no efforts to achieve the best that is in him. The public will appreciate this and architects in the measure in which their efforts are successful, and thus will be educated in an appreciation of architecture.

Just as in music the public of a certain town may attain to an appreciation thereof by the production of good music in their midst, so would the public be educated in an appreciation of architecture and the services architects can render, if a series of buildings great and small, bearing the stamp of sincerity and real architectural merit, were erected in their midst. How would Unification help this desirable end?

These proposals seem to me efforts to achieve by legislation and compulsion results such as teetotalism and other isms which defeat their own ends.

Forgive this effusion.

Yours faithfully,

(Sgd.) FRANK W. SIMON.

Higher Buildings

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—There appears to be either a lack of candour or a want of knowledge among some of the supporters of the higher buildings movement as to what it is that they actually propose.

On page 392 of your last issue, in an interesting article on Adelaide House showing what can be done on a very special site even under the present Act, the writer of the article leads off: "It is almost needless to say that no one ever meant to erect a building 120 ft. high fronting a street 20 ft. or 30 ft. wide."

Mr. Delissa Joseph himself, at the R.I.B.A. last week, also disavowed any such intention.

The scheme of his committee, however, as set out at the bottom of page 219 in the R.I.B.A. Journal, admits of no two interpretations, and cannot be run away from in this way. It reads as follows:—

> 3. *That, in the case of the City of London, buildings* 120 *ft. high, exclusive of two stories in the roof, should be permitted in any street, irrespective of its width or date.*

If the advocates and authors of scheme have withdrawn their views, them say so.

I am, Sirs,

Your obedient servan

W. R. DAVIDG

The Decoration of th Liner

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Are architects fully aware the vast field of opportunity for exercise of their originality and skill vided by the ocean liner? I refer the interior structure and decoratio the passenger accommodation only; of course, all other parts of the ship her machinery come within the prov of the naval architect and marine engi respectively.

But the requirements of interior st ture and decoration of passenger li are approximating more and more clo to the conditions found in buildings land, and it would appear a logical ceeding to entrust this work on s board to architects who have experi in designing hotels, mansions, and dwel houses generally.

In a few instances architects have l called in to prepare designs for the senger accommodation, but in the jority of cases it is the practice for scheme to be prepared by, or under supervision of, the naval architect, w the actual execution of the work is with more or less latitude to decora

Doubtless this method has often duced pleasing and comfortable acc modation, but surely this is not only criterion to be applied. Clearly question here, as always, is to be dec by that fundamental test: viz., to w extent does the scheme make use of conditions, space, materials, and m available in meeting the requiremen the problem? That this is a sati tory and complete test to apply wi admitted by those who are called u to decide who shall be entrusted with preparation and supervision of the d for the accommodation, and doub in any other branch of human act the decision would be to employ the fessional man having wide experien the kind of work—in this case, the a tect of structures of similar natur land.

But it is at this point that the arch and the artist frequently experi great difficulty in their dealings laymen, for the latter usually ad tenaciously to their views on the meri a design, and occasionally embarrass professional man by insisting on th corporation of their ideas in his sche

It is not suggested here that th always a disadvantage, for history vides several instances of amateur a tects of no mean ability; more genius in art seems to be distributed very erratic and prodigal manner.

Whatever opinions the professi man may hold on the merits of a par lar scheme, it is obvious that the n from the point of view of the public whom, after all, it is designed—can be determined by consensus of opi

are dealing with the æsthetic—
ıce, albeit far from a formal one
These are the difficulties which
ɔe met and overcome in any attempt
vince the layman in these matters
benefits likely to accrue from en-
ıg all work of this nature on ship-
to the professional architect; the
is too apt to think that what is
d is a generally useful plan of
modation combined with some kind
ıamentation, and he often fails to
ıize the great opportunities for
al treatment. But, for the reasons
above, I would enter a plea in
of handing over all work connected
passenger accommodation in liners
ll large passenger vessels to archi-
ɔf buildings on land.

architect would probably find it
ıary to modify somewhat his views
ling the value of space occupied
/eight of materials employed when
mes to apply his designs on ship-
board. The naval architect is trained to consider space on shipboard as of the greatest value, and also to reduce weight to a minimum. An increase in space and weight results in an increase in the items for first cost and depreciation and a bigger fuel consumption, besides swelling expenses in many minor particulars; moreover, weight and space increments are cumulative in the case of a ship: an increase in one part of the vessel is reflected in increments elsewhere.

It is only within the last twenty years or so that the schemes for passenger accommodation on shipboard have shown any considerable tendency towards a greater freedom in treatment; from the early days of steam navigation almost up to the end of last century, design and decoration of the passenger accommodation was very stereotyped, and I attribute this to the fact that the naval architect was mainly responsible for the scheme.

T. W. MACALPINE.

New Banking Premises

These banking premises—No. 69 King William Street—have been built by the Bank of Victoria from the designs of Messrs. Oswald P. Milne and Paul Phipps, FF.R.I.B.A., architects. The site is a small one of a somewhat awkward shape, and ingenuity of planning was necessary to get the best results. The banking hall occupies the ground floor and, though small, has been given dignity by being carried to a considerable height. It is panelled in oak. Above are the manager's room, the board room and offices, and in the basement are lavatories and strong rooms, etc. The front of the building is of Portland stone. Messrs. Patman and Fotheringham were the general contractors, the sub-contractors being: The Bath Cabinet Makers Co., Ltd. (woodwork, panelling and furniture); Messrs. Crittall & Co. (steel windows); and Messrs. Medway, Ltd. (lifts).

THE BANK OF VICTORIA, KING WILLIAM STREET, LONDON: DETAIL OF LOWER PART OF FACADE
OSWALD P. MILNE AND PAUL PHIPPS FF.R.I.B.A., ARCHITECTS

Law Reports

Claim for Work out of Contract

Hickman, Ltd. v. Grainger.

March 14. Official Referees' Court.
Before Sir Francis Newbolt.

In this case Mrs. Harriet Grainger, of 9 Brewer Street, Soho, and Harrow, was sued by Messrs. Hickman, Ltd., of Great Russell Street, for £950 9s. 11d., balance of charges amounting to £1,899 2s. 9d. for building and decorative work done to Mrs. Grainger's restaurant at 9 Brewer Street.

Mr. Hawke, K.C., appeared for the plaintiffs, and Mr. Willoughby Williams, with Mr. Rowland Thomas, was for the defendant.

According to counsel's statement the claim arose out of work done under two contracts by which plaintiffs undertook to do certain work for £1,320. During the progress of the work the defendant required a considerable amount of work to be done which did not come within the terms of the contract and was not contemplated at the time the contract was made. By these additions the charges were increased to £1,899. During the progress of the work plaintiffs were asked by the defendant to do certain work at her house at Harrow, which accounted for £47 of the total sum, of which plaintiffs had received in all £948, leaving the balance which was the subject of the action. The plaintiffs, said counsel, claimed a good deal for delay in the work.

Sir Francis Newbolt: I do not know of any case in which a contractor can claim damages for delay. He might have thrown up the contract.

Mr. Hawke said that directly the plaintiffs began the work they were met by the people next door, who told them they were trespassing. The plaintiffs contracted to build a light balustrade or wall, and had everything ready to do so; but when they started the work the owner of the premises next door said: "You are trespassing on my property and must not go on with the work." On asking the architect what was to be done under the circumstances he said: "You will have to take it down and build it elsewhere."

The Referee: You are obviously entitled to what you have lost under such circumstances.

Mr. Hawke said that defendant pleaded that the work was done under a contract, that the prices charged were unreasonable and excessive, and that payment was to be made according to the contract upon the final certificate of the architect, and that any difference should have been sub mitted to arbitration. Having regard to the form of contract and the authorities applicable, said counsel, the architect's certificate was not conclusive, and if the matter in dispute ought to have gone to arbitration it was defendant's own fault that it had not done so. The Referee had in fact become the arbitrator, and the restriction on litigation had gone. The defendant had entered a counterclaim, saying that plaintiffs had undertaken to do a certain part of the work within a certain time and had not done it, in consequence of which she had lost a number of customers. She was, however, unable to particularize any of the lost customers, as they were only known by nicknames such as "Mr. Monkey-bra or "Mr. Tophat."

A good deal of evidence was take the course of which Sir Francis said case was a very awkward one, and it difficult to see how the defendant c escape all liability.

On the second day of the hearin consultation took place between parties, resulting in a settlement of action, by which plaintiffs took judgr for £550 on the claim and on the cou claim also, with costs in each case. was also agreed that there should stay of execution for seven days if w that time the lease of 9 Brewer Stree deposited with plaintiffs by way security.

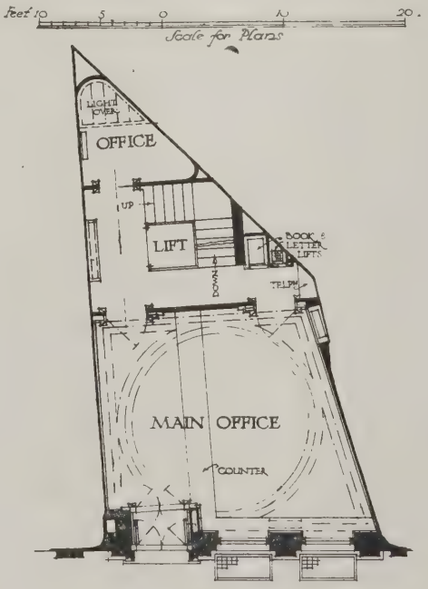
Dry Rot—Liability

Bagge v. Overall and Son.

March 14. King's Bench Division.
Before the Lord Chief Justice and a Special Ju

This was an action by Mr. John Pa Bagge, of 62 Albemarle Road, Bec ham, against Messrs. J. Overall and builders and estate agents, of Manor Kelsey Park, Beckenham, to rec damages for alleged misrepresenta in connection with the purchase by plaintiff of his residence 62 Alber Road. The plaintiff alleged that defendants represented that all dry r the place had been eliminated and all wood that was likely to be affect future had been properly treated wi preventive. Plaintiff's allegation that that representation was not Defendants, by their defence, denied they concealed or endeavoured to cor the defects or make any misrepres tion.

Mr. St. John Raikes, K.C., and A. F. W. Bagge appeared for the plaii and Mr. J. B. Matthews, K.C., and W. R. Briggs for the defendants.



GROUND FLOOR PLAN SECOND FLOOR PLA

BANK OF VICTORIA, KING WILLIAM STREET, LONDON.
OSWALD P. MILNE AND PAUL PHIPPS, F.R.I.B.A., ARCHITECTS.

Raikes stated that the plaintiff pur- his house from a Mr. Marshall for Plaintiff was introduced to his n 1920. Before he took possession ff instructed Mr. Arthur Martin , a surveyor, of Clifford Street, to inspect the premises. Mr. met Mr. Overall junior at the and went over it. Extensive were then being carried out. At nterview Mr. Overall said that all y rot had been eliminated. Apart his, plaintiff based his claim upon egation that Mr. Overall did cer- ork with a view to concealing the on of woodwork. If that was so, esence of dry rot must have been nt, while the work of concealment he ultimate discovery of the defects more difficult. Therefore the de- ts must have known of the exist- f the dry rot, and did not make its ce known to the plaintiff. It was t, proceeded counsel, that Messrs. l's work was extensive, because the n out to £550. They had acted as for the sale of the premises to arshall, and Mr. Overall told Mr. that all the wood attacked by t had been removed and new wood while other of the old wood had reosoted. After Mr. Bagge took ion it was discovered that under vly laid dining-room floor the joists adly attacked by rot, and creosote had been painted over rotten wood. In the resulting examination it was found, among other things, that the bearer of the stairs and the pillar joists were absolutely rotten, and the staircase was in a dangerous condition. The string of the cellar stairs also was rotten, and the old rotted wood was covered with new strips of board so as to hide the damage. Altogether, Mr. Bagge had to expend £400 in repairing the damage.

BANK OF VICTORIA: MANAGER'S ROOM.

BANK OF VICTORIA: MAIN OFFICE.

Mr. A. M. French, surveyor, of Clifford Street, London, W.C., gave evidence for the plaintiff to the effect that Mr. Overall told him that all dry rot in the house had been properly cured. He accepted that representation. Later, however, it was found that a great deal of the remaining woodwork was rotten. Under the dining-room floor the joists were affected with rot, the staircase was so dangerous through rot that had heavy furniture been carried up it it might have collapsed. He noticed in one case that a piece of wood had been hacked out and the hole filled with plaster and painted over.

In reply to the judge, witness said he could not say whether that plaster was new or not. Mr. French said dry rot was caused through unseasoned wood not being properly ventilated by a free passage of air around it. People often courted it by placing linoleum all over the floors and up to the skirting, stopping the passage of air. The remedy was expensive because the only real thing to do was to cut away all affected wood and renew it.

Mr. J. B. Matthews, K.C. (for defendants), said his case was that the casing and painted plaster was in the house long before his clients came on the scene. When defendants left the house they honestly thought they had made a good job of it and got rid of all dry rot.

The jury returned a verdict for defendants, and his lordship entered judgment for the defendants with costs.

R.A. Sending-in Days

Following are the specific dates which have been fixed by the Royal Academy for the receipt of artists' and sculptors' work: March 24, water-colours, pastels, miniatures, black-and-white drawings, engravings and architectural drawings; March 25 and 27, oil paintings; March 28, sculpture. All works are to be delivered at the entrance in Burlington Gardens.

Little Things That Matter. IX—Sanitatio

By EDWIN GUNN, A.R.I.B.A.

NO better instance of a little thing that matters could be given than that of the position of taps over a pantry sink. Once I was informed by an hotel manager that he had saved fifty per cent. of his considerable periodic bill for breakages of china and glass by removing the hot and cold cocks to the corners of the wash-up sink. In this position they are equally convenient for use, and they do not come so readily into collision with the articles being handled. See Fig. 32.

The runs of hot and cold supplies to an ordinary scullery sink are worth more consideration than is often given to them; in fact, the surroundings generally of such a fitting want study in the light of the operations performed. As to position; under a window is, of course, good, and if the cill can be kept about 4 ft. high, no great difficulty arises. Where the cill is necessarily lower it is well to have the sink so far out of centre with the window that the water services may have a fixing on the wall either to the right or the left. See Fig. 33.

Every sink should have a draining board on either hand—one for dirty articles and the other for clean. The best position for the plate rack is over the right-hand board if it is fixed on the return wall, or over the left-hand board if at the back. Articles are normally held in the left hand and washed with the right, and a trial will convince one that this is the easiest position for use. A lodgment for soap, brushes, etc., should be provided; if the window cill is tiled this will serve the purpose, though some good sinks have a drained ledge provided, which is better. An angle position for a sink is not impossible, and is capable of almost "decorative" treatment in the form of a sort of retable or stepped gathering back of the corner space, which if covered with quarries makes an admirable reposing space for odds and ends. It pays to tile at least 12 in. high around the back of the sink and draining-boards, which otherwise always becomes greasy and shabby in a very short time. The height at which sinks should be placed above the floor level is a perpetual source of complaint and dispute. The lack of a final and conclusive solution is due to the many purposes for which a sink is liable to be used, and the varying stature of its users. If the sink is so high that a standing position is comfortable for the work to be done, then it becomes difficult to lift a full pail or heavy saucepan therefrom.

The windows of w.c.'s are often placed immediately behind the fitting. This is a natural but inconvenient position, as it necessitates a twisted flush pipe and exposes the w.w.p. to the greatest risk of frost. A side position as Fig. 34 is probably the best and most private. Baths of the ordinary "Roman" form should, whenever space allows, stand free to access all round, in the manner usual in hospitals, though such ample space on all sides is not necessary. Often the hot-water supply pipe may be so disposed as to serve as a convenient towel-airing rail, and if the scullery sink supply forms the end of the run it will usually give off some heat as well. If quick-acting draw-off cocks are used anywhere on a system under pressure, care should be taken that the supply pipe passes the cock with a butt-end above, which will act as an anti-concussive valve and check water hammer.

Two points with regard to the gas service should be remembered. First, that the house connection from the meter should be by a T-piece with a blank drop below the outlet fitted with a screw plug, by which liquid in the pipes may be drawn off. Secondly, that an extension to the loft or roof space saves a great deal of anxiety during severe frosts, as tanks and pipes can be kept from freezing—usually by an ordinary gas-jet, or by one of the special heating burners now made.

Rainwater pipes should be fixed so that it is possible to paint behind them. This is usually done now by using pipe distance pieces behind the ears. Where separate surface-water drainage e there is great advantage in the use of or back inlet gulleys for rainwater, a gratings, being blocked by leave rubbish, do not impede the flow of w A somewhat similar device is applie sink waste gulleys by several make drain fittings, and is well worthy of a tion.

A vast improvement to the u greasy open channel of stonewar cement is a self-cleansing fitting in vi the "by-law" 18 in. channel receiv wastes in the direction of flow ar covered by a grating (Fig. 35).

Two further small items connected i sanitation. See that the benching of manholes rises for 3 in. vertically of main channel and that it is rounde above to form a shoulder. This fo tion prevents the deposit of solids o benching opposite to any branch, affords a foothold for workmen attending to the drains (Fig. 36). isolated v.p. in connection with a pool becomes a necessary but unsi object of the kitchen garden, it ma humorously disguised by conversion a standard dovecote. Fig. 37 is e explanatory.

Aberdeen Society of Architect

At the annual meeting of the Abe Society of Architects, the Presi Mr. George Bennett Mitchell, M.B.E Vice-President, Mr. R. G. Wilson, F.R.I.B.A., and the past-President George Watt, F.R.I.B.A., were a pointed. The following other mem of council were elected: Messrs. J. Allan, W. L. Duncan, W. E. Gi C. George, G. Gregory, A. H. L. kinnon, H. Maclennan, D. S. Macma and J. B. Nicol. Mr. George Watt re-elected representative on the Co of the Institute of Scottish Architec

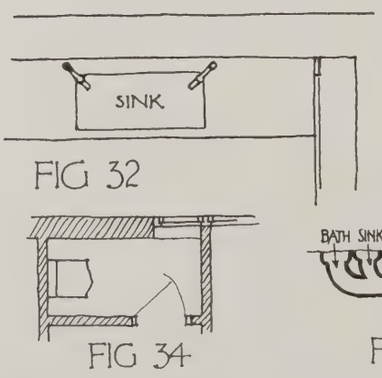


FIG 32

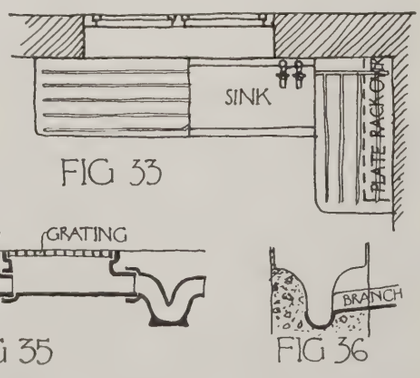


FIG 33

FIG 34

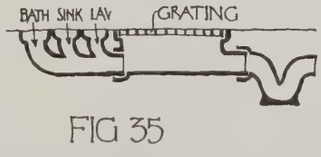


FIG 35

FIG 36

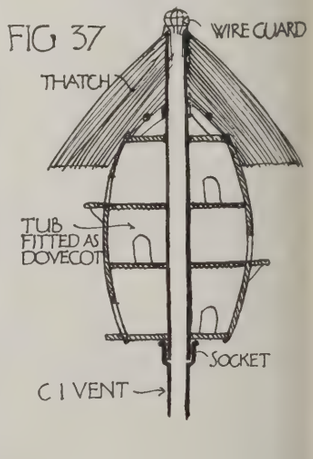
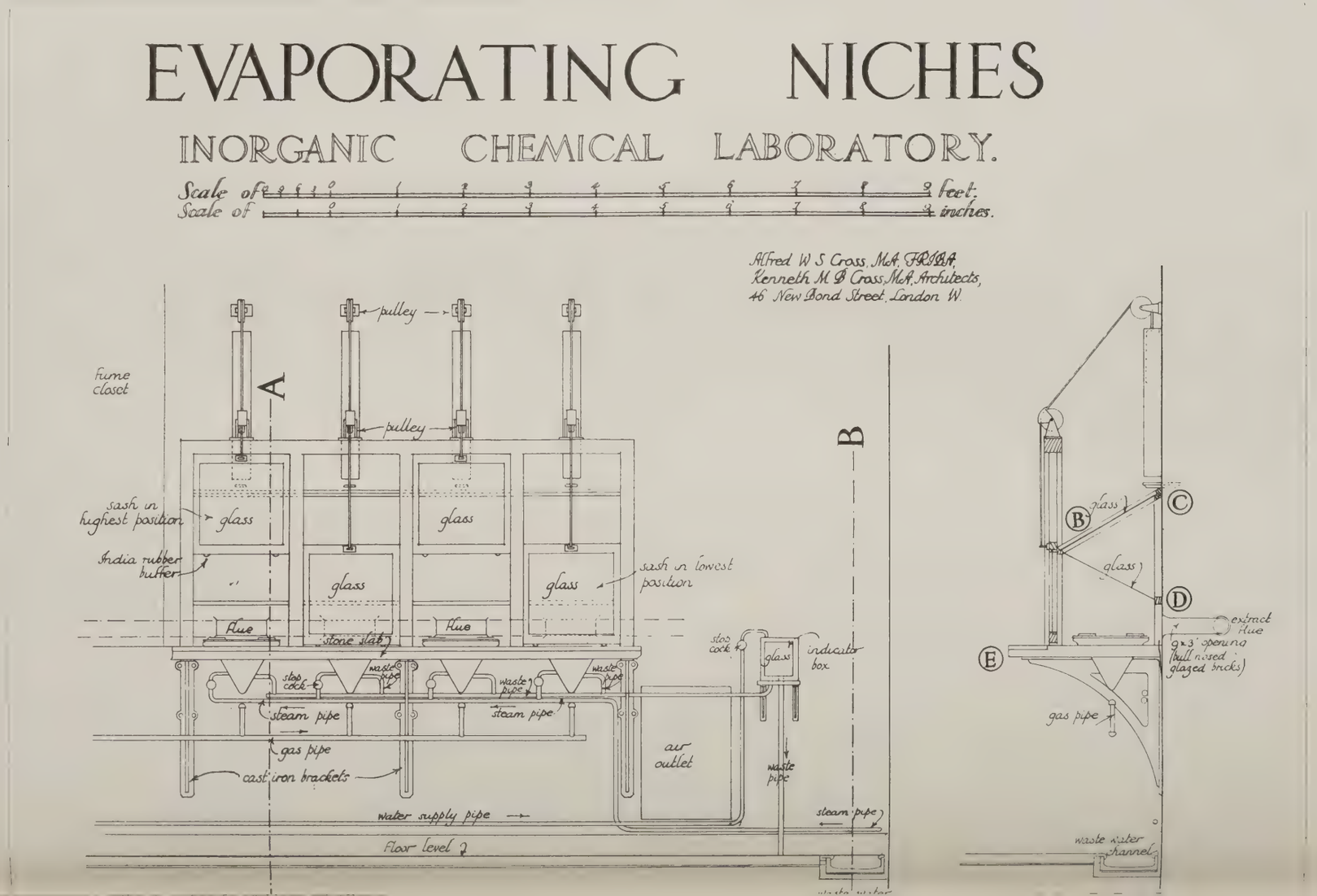


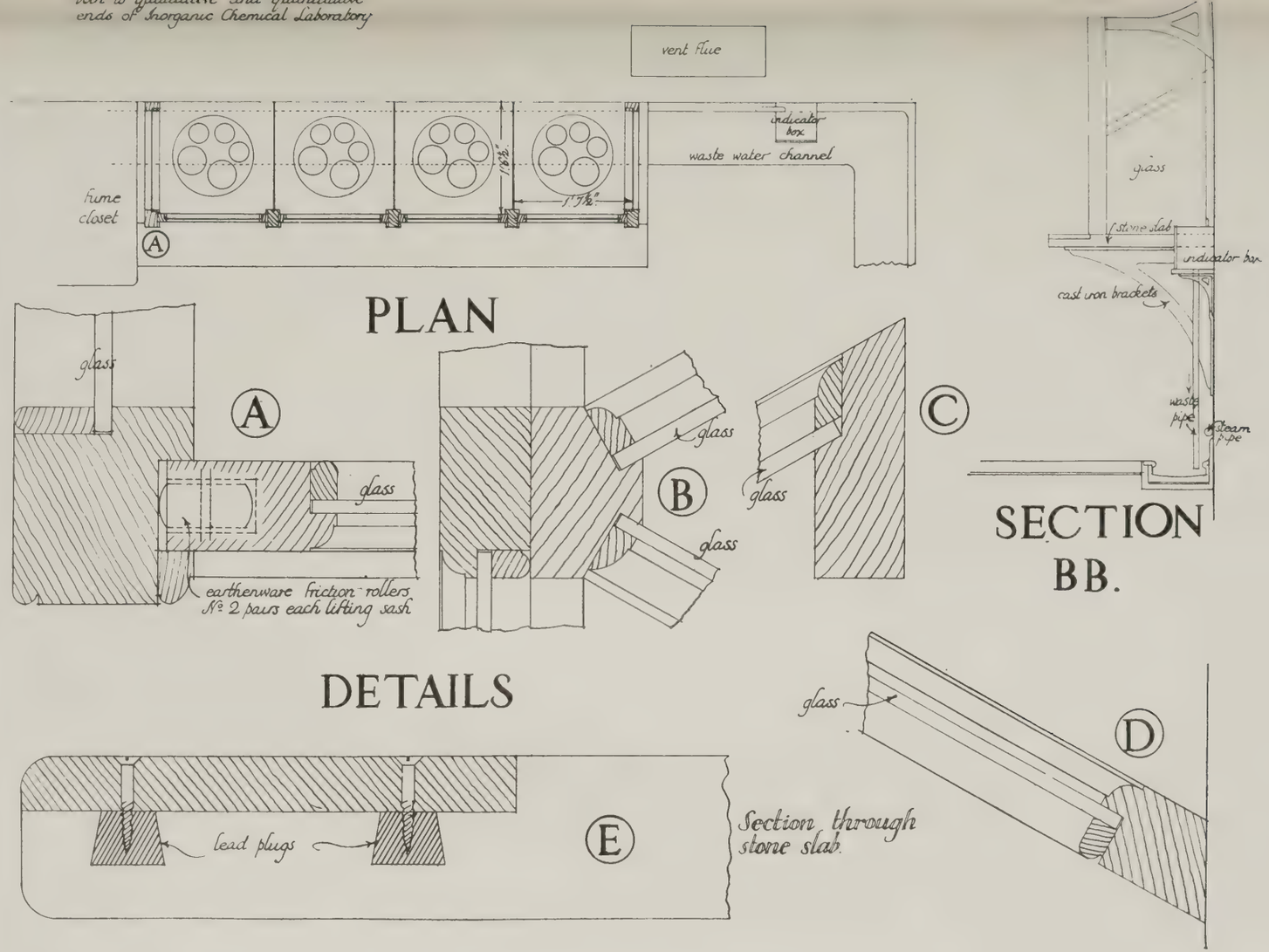
FIG 37

Practical Notes for Architectural Draughtsmen (Series II) Technical Schools and Science Buildings.

13.—Evaporating Niches

A. W. S. Cross, M.A., F.R.I.B.A., and Kenneth M. B. Cross, M.A., Architects





The above drawing shows the special niches or cupboards used for evaporating liquids in chemical experiments. Each of these cupboards contains a copper dish in which several small receptacles are placed for the accommodation of the liquids whose evaporation is required. Steam is brought from a central supply to heat the water, and is controlled by stop-cocks. A 9 in. by 3 in. opening and an extract flue provide the necessary ventilation. The construction of the table is shown in the detail at E, and the construction of the cupboards in the detail at A. Details of the framing are also shown. For further particulars see the note on page 447.

Zoning to Secure Amenities*

By BARRY PARKER, F.R.I.B.A., M.T.P.I.

WHEN Mr. Pepler asked me to write a paper on "Zoning to Secure Amenities," it became necessary at I should try to define for myself ie extent to which zoning was advoted with the object of securing amenes, and how far it was advocated with her objects. It seemed to me that if a ide definition were given to the term amenities," a great number of those ings which can be secured by zoning ould come within it.

We zone into "use" districts, "height" stricts, and "area" districts. If we gard things affecting health, as well as ings affecting appearance, as covered the term "amenities," and have relted industry and commerce to their lotted districts, that which can be cured by zoning seems, in the other stricts, to be comprehended within the rm "amenities," with the exception of e protection and improvement in operty values which zoning creates.

All that which can be secured by restrictions placed on the heights of buildgs seems to come under "amenities"; d that which can be secured by rericting the number of buildings to the re, or the area of a plot which may be vered by buildings, also seems to come der "amenities."

One thing which most people appreciate ich zoning can prevent, is the lowering a whole neighbourhood by the introction into it of one factory, and the preciation of the value of all the prorty in that neighbourhood due to this. hat zoning can secure for factories is om for expansion, transport facilities, ether by rail, road, or water; proximity sources of power and raw materials, d to markets, exchanges, and labour; gether with proximity to interdependent ctories.

The Cleveland Example

To find zoning done with great detail, ought, and care, we have to go to nerica, and we might take the recently blished Zone Plans for Cleveland, io, as an example. In these plans the y is zoned in three ways: (1) into se" districts; (2) into "height" dists; and (3) into "area" districts. It very interesting and important to te that under the heading "use" dis-icts there are no less than seven subvisions; and it would seem that some the chief merits of the proposals are e to this. The divisions are: "dwellgs," "apartment houses," "retail," ommercial," and three sub-divisions "industrial," which are: (1) an industrial district in which only industries ich create no nuisances are allowed; a district in which semi-nuisance lustries are allowed; and (3) a district which industries of any kind may be ablished.

Under "height" districts, the city is vided into six. The heights of buildgs are regulated in two ways: (1) in ch of the six districts there is a maximum height beyond which no building y be carried; but, in addition, the ghts of buildings are regulated by the widths of the streets on which they stand. So that, unless the street is wide enough to admit of a building being carried to the maximum height allowed in the district in which it is situated, it cannot be carried to that height. Under "area" districts, the city is divided into five types of district. In prescribing a minimum area per lot, in each district, the promoters of the scheme have taken the family as the unit; and there would seem to be many advantages in taking the family as the unit. Their definition of a "family" is "a housekeeping unit." In those districts in which the greatest density of population is permitted, they only prescribe 612 square feet of "lot" area per family. But in the districts which are to be most sparsely populated, they demand 5,000 square feet per family. A building arranged for more than two families may not be constructed in a dwelling house district.

The requirement of a certain number of square feet of "lot" area per family applies to residence buildings, whether they are within the residence districts or are within business or industrial districts. It is obvious what the effect of this will be; it will be practically to prevent people living in industrial areas, as anyone wanting to erect a one-family house in an industrial area would be required to provide that house with 5,000 square feet of "lot" area, in a district where land values would make this prohibitive.

Higher Buildings "Retrograde"

A retrograde movement for higher buildings in London has recently been initiated by Sir Martin Conway. "Zoning to Secure Amenity" is perhaps influenced as much by questions of permissible heights of buildings as by anything else, so I will discuss this movement, that I may have the advantage of talking specifically instead of generally. By a resolution of the council of the R.I.B.A., the committee known as the "London Building Act Committee" was brought into existence on 12 April 1920. This committee reported in favour of the London County Council permitting higher buildings in London. The nation's gratitude is due to Mr. Arthur Keen for having declined to sign that report, and for his having produced a minority report.

Modern research has shown that sunlight is even a more powerful agent in the eradication of disease in tropical climates than it is in temperate climates. It has been found that it is in places to which the direct rays of the sun never penetrate that disease is generated and fostered in hot countries. So completely has this been proved, that in Sao Paulo, in Brazil, a tropical city with 500,000 inhabitants, the authorities have passed a law prohibiting anyone from building a wall which prevents the rays of the sun from reaching the base of any other wall for at least a minimum of two hours a day throughout the year. This means that in no new buildings can there be a well or court so deep that the sun's rays do not reach the bottom of it for at least a minimum of two hours a day. It means that every building has to be so far away from its neighbour on the same side of the street that for at least two hours a day it casts no shadow on any part of the walls of a neighbouring building.

The effect of this law is to prevent buildings on the same side of a street being as close together in a street running north and south as they may be in a street running east and west, because the northern sun, being high in the heavens, sends its rays almost vertically down into the space between two buildings. So in Sao Paulo we get the houses spaced apart differently, for all the different orientations of the street from due north and south to due east and west.

Further the appreciation of the importance of the effect of sunlight in eradicating disease and promoting health, has led the authorities in Sao Paulo to prescribe that the window area of every room shall be at least one-fifth of the floor area, instead of one-tenth as is prescribed here.

We should feel profoundly thankful that the retrograde suggestion to have higher buildings in London has, for the time being, been silenced. The relatively low height of our buildings in London, in comparison with those in many American cities, is a legacy for which we should be grateful, when we see the efforts which are being made in New York and other American cities to prevent the recurrence in the future of the troubles their high buildings have created for them.

It is in prescribing the number of houses to the acre, and the proportion of the area of each plot which may be covered by buildings, that zoning can do so much to secure amenities. But what a zone plan may also do, by fixing building lines, is far from inconsiderable. Then absence in the past of the power to enforce a building line has created many of the difficulties met with in American cities, and has made possible the great injuries which one man has done to another. I would not fix these building lines at the same distance from the street throughout the length of a road in every case. I would so fix them that buildings on carefully selected sites should stand in front of, or back from, the general building line.

The Agricultural Belt

It is by prescribing the number of houses to the acre that an agricultural belt around a town can be preserved. It has now been proved that it is entirely practicable to enforce the spirit of a regulation which lays down the number of houses to the acre. If it is possible to secure twelve houses to the acre, then it is possible to secure twelve acres to the house (or whatever number may be thought to be right in an agricultural belt) in the same way. An agricultural belt is surely one of the greatest amenities a town can have. The only alternative way of securing it to the one I have suggested would seem to be the scarcely practicable one of prohibiting building of any sort on it, as has been done with the "Stray" at Harrogate. The Zone Plan prepared with a view to securing amenities would, of course, prescribe the areas to be left as parks, etc; and on it would be shown sites for public and semi-public buildings.

* Extracts from a Paper read before the Town Plan- Institute.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE

The Government Housing Policy.

Sir A. Mond, in a recent debate on the Ministry of Health vote, replying to criticisms of the Government's housing policy, said that the present position was that the average cost in July last of £1,100 for houses built by tender still held good. It was true that considerable reductions in cost had been made since then, but, unfortunately, the bulk of the commitments in respect of the 176,000 State-aided houses was entered into before that date, and recent low tenders applied only to comparatively few of those houses. The fall in cost had affected to some extent some of the old contracts, but it would be unwise to budget for a greater saving over all than for about £4,000,000, reducing the all-in-cost of the 176,000 houses to £190,000,000. That was the Government's contribution to housing. This would cost the taxpayers about £10,000,000 a year for a considerable time to come.

Shortage of Plasterers.

The Government had completed already a relatively small part of the 176,000 houses, and one reason why they were not getting finished was that plasterers could not be secured. The Government still had a large programme to carry out, and they were going on with it. As to Government policy in the future, he was not in a position to say anything. They had begun 150,000 houses. On March 1, 91,000 were completed. The number of houses authorized, but not yet started, was 20,000, and nearly 5,000 were not yet allocated. Altogether local authorities and private builders had completed 119,000 houses. They still had to build 59,000 local authority houses, and 14,500 private builders' houses. There were 25,000 houses still to be started, and 98,000 to complete. He was convinced that, with a little management and patience, private enterprise could be induced to come in again.

Clearing the Slums.

So far as the slums were concerned local authorities should use their powers for the repair of individual houses. A great deal could be done on those lines. A start had been made in dealing with the slums, and at present there were ten schemes of wholesale demolition and clearing where no other course was possible. The problem of insanitary areas in London had been surveyed as a whole by the London County Council. Work was proceeding in the Tabard Street (Southwark) scheme, and a start had been made on the Brady Street (Bethnal Green) scheme, while schemes of smaller areas submitted by some metropolitan borough councils had also been confirmed. Work was also in progress in Liverpool and other cities and towns. The total number of dwelling-houses in schemes submitted, including those confirmed, was over 4,000, with a population of approximately 20,000. He was very anxious that the stain of the slum should be removed.

The local authorities would sell, under certain restrictions contained in the Housing Act, 1919, those houses which belonged to them. Those restrictions would have to be removed by Statute before the Act became operative. He had consulted experts, who were not at all sanguine that this was the moment to sell houses.

The Imperial War Museum.

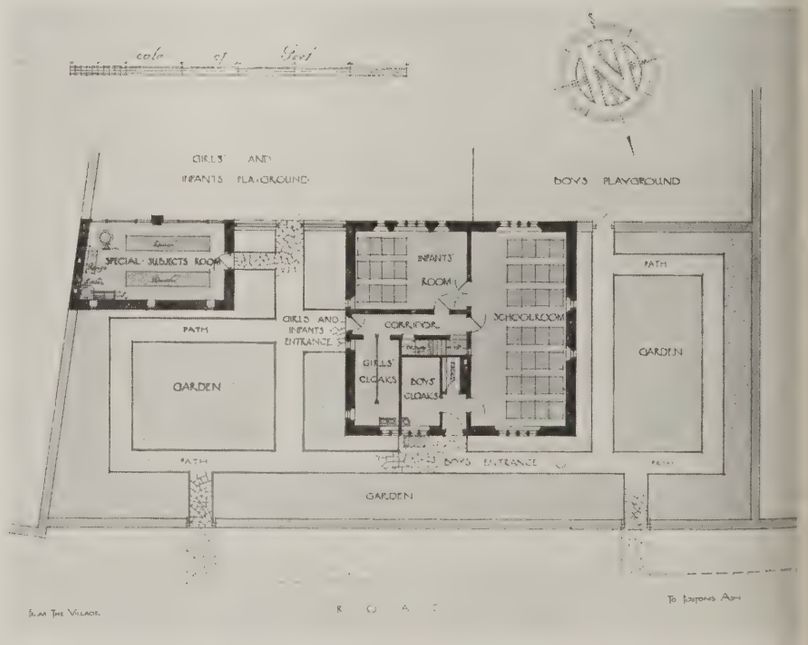
At question time Sir J. Gilmour, speaking for the First Commissioner of Works, informed Sir H. Brittain that it was not proposed to acquire or erect a building for the Imperial War Museum now housed at the Crystal Palace, the lease of which ended in April, 1924. The Office of Works had, however, been inquiring into the possibility of housing the museum in space shortly to be vacated by the Science Museum, and in a portion of the galleries of the Imperial Institute. As soon as a decision was reached he proposed to make an announcement.

Composition Floors

(*Contributed*)

To resurrect a lecture given eleve months ago for the purpose of challengin statements made therein may seem somewhat strange proceeding; but refer ences are so frequently made to this lectur (it was by Mr. Percy Adams—the subjec "Cottage Hospitals") that the resuscita tion is justified. I would like to refe specially to Mr. Adams's assertion tha composition floors were not suitable fo cottage hospitals. This was altogethe too arbitrary to be accepted by anyon who had a knowledge of the manufactur and laying of jointless composition floor ings. It will suffice to state that a com

VIEW FROM NORTH-EAST



THE VILLAGE SCHOOL, MISERDEN. R. S PHILLIPS, F.S. Arc., ARCHITECT

THE VILLAGE SCHOOL, MISERDEN. R. S. PHILLIPS, F.S.Arc., ARCHITECT.

sition flooring passes through five arate stages of development :—
. The apportionment of the chemical redients analytically.
. The mixing of the ingredients when apportioned.
. Preparation of the floor to receive composition, which is the most im-tant item of all to ensure the success the flooring when laid.
. The laying of the composition in stic state.
. The finishing process.
An examination of these stages one by will serve successfully to counter the ious objections raised by Mr. Adams.
. The apportionment of the chemical redients analytically : "Specification" ves that no flooring can be laid without iller such as wood-meal, and demon-ates the quantity necessary.
. The mixing of the above ingre-nts, upon which depend the colour and aring properties of the floor; if this is perly carried out, and the above cified quantity of wood-meal is in-ded, the result will be a floor which s not wear rough or lose its colour.
. Preparation of the floor to receive composition : Important points are— mination of surface of floor to see if concrete is dry right through and from voids; whether it will be neces-y to wire the floor; in the case of wood, see that the boards are nailed down securely, not varnished or painted (or, at least, cleaned off in these cases), and free from dry-rot. If these details are, any of them, overlooked, the floor will probably crack.

Finally, there is the preparation with chloride water, which is most important, as it is in this operation that the floor is made to bind itself to the surface upon which it is laid.

It will be seen from the foregoing that there are many opportunities for unsatisfactory results, whether by negligence or design, and that is probably the reason for the prejudice of many architects.

The ingredients can be mixed in a manner highly satisfactory to the contractor, but less so to the person ordering. Again, since magnesite and its price vary enormously, there is a further opportunity for profit. In either case the resultant floor will be a failure and unsatisfactory.

If, however, the best materials are used, and are properly mixed and laid, the resultant floor is invariably good and gives no sleepless nights to the guarantor of its good qualities.

Surely, then, it is hardly fair to dismiss all composition floors as a whole, for the sake of the failure of *some* floors laid by persons either inexperienced or anxious to get rich quickly.

As regards cost, surely a jointless composition floor, which is guaranteed by any reliable firm, cannot be considered expensive as compared with any other material for flooring on the market. Again, for a jointless cove-skirting with round corners, there is no material to equal composition jointless flooring for this purpose, as flooring and cove-skirting are literally one.

Lastly, it is because the writer has had twenty-seven years' experience of jointless composition floors, etc., that he considers himself entitled to write on this matter.

Miserden Village School

This small Church of England school has been erected from the designs of Mr. R. S. Phillips, F.S.Arc., architect, at Miserden, a village on the Cotswold Hills. The work was carried out by local craftsmen, and affords an example of the adaptation of the traditional local style of building. The walls are built with a rough hammer-dressed face with dressed quoins, etc., and have stone mullioned windows fitted with metal casements and leaded glazing. For the roofs stone slates, laid in graduated courses and without metal valleys, have been used. The walling and paving stones were quarried on the site, and the slates for the roof dug in the neighbourhood.

Accommodation is provided for eighty children, including twenty-four infants. Separate cloakrooms, above which is a teacher's room, are provided for boys and girls. Classes in cookery and handicraft are held in a detached special subjects room. The school is warmed by means of a low-pressure hot-water heating installation, with pipes and radiators in all rooms. Mr. Jesse Freeman, of Miserden, was the builder.

Details of Science and Technical Buildings

On our double-page plate we illustrate some instructive details of evaporating niches. In the course of chemical experiments the evaporation of liquids is frequently required, and special niches or cupboards are designed for this purpose in the fully equipped laboratory. These cupboards contain a copper dish or cone-shaped vessel in which several small receptacles are placed for the accommodation of those liquids whose evaporation is required. In the cupboards illustrated the water in the larger vessel is heated by steam brought from a central supply, and controlled by stop-cocks. Gas can also be used for this purpose, and in any case it is desirable that both gas and water should be laid on. A 9 in. by 3 in. opening and an extract flue provide suitable ventilation. The table is formed by means of a stone slab supported by cast-iron brackets, but outside the cupboards a hardwood shelf is let into the stone slab as shown in the detail at E. The glazed cupboards have weight-hung sliding sashes with rubber buffers, the easy motion of the sash being ensured by means of earthenware friction rollers. See detail A. Waste water discharges into an open channel. Details of the framing are also shown. These illustrations form the thirteenth of the series of drawings of science and technical buildings specially prepared for the JOURNAL.

The Relation of Plan to Elevation*

SPEAKING at the Liverpool School of Architecture Mr. Goodhart Rendel said: The subject which I have chosen to talk about to-day is one of the mysteries of our craft, a subject about which the lay critic is generally ill-informed, but which to the architect is an imperative study. I do not say that the expression of plan in elevation is a virtue in architecture. I say, rather, that it is a virtue in an architect. By its practice the architect keeps himself in good condition for artistic creation. Similarly, positive irrelevance of elevation to plan is not of itself a vice in architecture, but its perpetration is likely to prove a bad vice in an architect, and one which leads to artistic sterility. All major architectural forms have a rational origin, more or less remote, and, if the art is not to die, from new needs new forms must arise. Experience shows that only thus can they come into being; little good has ever come of arbitrary invention in architecture. The architect who falsifies his plan to make it fit a preconceived elevation not only deprives his building of its rightful individuality, but also is on the road to becoming incapable of anything except of repeating himself or perhaps of repeating other people.

This is the danger which threatens American architecture at the present time. The gay parterre of American architecture, which we all admire, is composed too much of cut flowers from Europe.

In what I have said so far I have assumed that the plan of a building is that arrangement of rooms which best satisfies the claims of usefulness and order—of usefulness, since usefulness is the motive of almost all building; of order, since without order man's work were lower than the honeycomb or the spider's web.

"Expressing the Plan"

Given, then, that the architect is wise in letting his plan have its say in the shaping of his elevations, how far is this likely to carry him in design? We are apt to speak—I myself have spoken already in this lecture—of the architectural "expression" of a plan. What do we mean by this? Surely we mean the maintenance of the relative importance and dignity of these rooms, one to the other, in whatever be visible of them externally; that the drawing-room windows are taller than those of the servants' bedrooms; that the chief entrance is emphasised more than is the door of the coal-hole. The study of the naked plan also is as essential to the architect as the study of the naked figure to the painter, and a foundation of sound architectural anatomy is necessary to all expressive buildings.

This degree of "expression," however, is not always possible; in street buildings, for example, you can hardly express the anatomy of the structure in a single frontage. Sometimes, also, there may be next to nothing to "express"; the "expression" of the plan of a warehouse must be almost altogether negative. Sometimes, again, "expression" which is possible may not be desirable for reasons which are not architectural; probably the less that is made of a crematorium chimney the better. In short, a plan may be inexpressible, either because of its confined position or because it contains nothing to express, or again because it contains that which is better not expressed.

Therefore, although this expression of plan in elevation is a virtue in an architect, it cannot be a virtue necessary to salvation. Its opposite vice, however, is extremely dangerous. If I make a plan with a great room in its midst, and allow that great room's great features to dignify the middle of my elevation, if the plan is right, the elevation has a very good chance of being right too. But if, with a plan containing no such great room, I elect to adorn the middle of my façade with windows and other details of exaggerated size, the odds are thousands to one against my hitting upon pleasing proportions.

Modern Planning

There has been a radical change in the system of planning. Almost all modern planning makes much use of the partition-wall, a thing little used by the ancients. By partition-wall I mean a wall which divides one room from another without serving any structural purpose. It is difficult at first to suppose that such a thing is not as old as building, but a little recollection will show us that it really is not so. Let us imagine a primitive tribe of hut-dwellers of which each family man provides himself with what we to-day should call a one-roomed tenement. The chief of this tribe will feel it due to his position to inhabit twelve one-roomed tenements. These he will place close together, and he may even rig up some rude shelter over the path from one to the other. The growth of skill in building will provide the next chieftain with a conglomerate of huts in which the space between hut and hut has been annihilated. The twelve one-roomed tenements will now have become one twelve-roomed tenement. But the conglomeration will not have been fusion. Each room will retain its huthood, each room will still have its own roof. Perhaps if two rooms have been placed end to end, so that their roofs are continuous, their common end-wall may have lost its structural function and become a partition-wall dividing transversely an oblong hut. This will be the first emergence of the principle of planning by division, and this is about as far as the primitive tribe will get. In the main the tribal architects will still plan by the method of congregation.

Contrast with such a hut-group the plan of a modern twelve-roomed bungalow. The modern bungalow will probably have but a single span of roof; its only structural walls will be its external walls. Architecturally it will be not twelve units juxtaposed one to the other, but one unit divided into twelve sections. Its planning will be done entirely by means of partition-walls—in other words, by the method of division.

I think that now if we ask the question, "What is it which has made so great a difference between ancient and modern conditions?" in the relation of plan to elevation, we may perhaps find an answer. The difference is, surely, that ancient plans are congregations of simp units, whereas modern plans are general either compound—that is, subdivided- units or congregations of such units.

Architecture speaks in terms of stru ture and of ornament; but architectur vocabulary is limited, and capable on of the description of things of archite tural interest. What are these things What is it in a plan which we can hope express in an elevation?

Before trying to answer this questic let us clear the ground by eliminatir some, at any rate, of the things which a clearly inexpressible. Foremost amor these nowadays will be the need f cheapness. Economy is a powe generally unfriendly, neutral at bes with which the designer must treat, b from which he can expect no hel Beauty is not thrift, nor thrift beauty.

Another thing architecturally ine pressible is the irregularity caused in compound plan by the orientation of tl building, the windows placed abnormal in rooms in order that they may cat the most sunlight, or perhaps that th may avoid it. South windows in corn rooms and north lights in studios oft rob one elevation to over-window anothe and the reason of their so doing cann be made apparent to the eye. Tl demand of the Education authorities f left-handed lighting in class-rooms w play great havoc with the elevation schools—do we not all know it?

Again, the more important rooms in civic building, those rooms which shou be immediately accessible from the fro entrance, and should above all be reveal upon the façade, may be compulsori banished to the back of the site, whe only can they be out of the sound traffic. The elevation cannot expla this.

The Simple Elements

Does it not seem then that a plan c actually be productive of beauty on when it is absolutely the best plan for purpose, without regard to peculiariti of position or the necessity of cheapnes I think that this is so. Moreover, as have said, architecture can only expr architectural things, and the archite tural things in a plan which are wor expressing are simple and few. They a however, extremely important.

First, unless the whole plan be in its the unit, there are the units of which t design is composed and the manner their combination.

Next there are the relative size a importance of these units one with t other.

Then there are the distinctions kind between these units, between roo and communications, between places state and those of daily use, betwe rooms for men and storerooms for thin

Chimneys, too, must be placed to s party-walls, and a roof ridge will sugg the mid-line of the space which it cove

Large and important spaces buri deep in the plan may reveal themsel externally by their dominating roofs domes. The roof plan of a building usually the one plan in the making which the architect fancies himself f of all æsthetic obligations. If in

* From the R.I.B.A. Journal.

re travelling by air becomes general, od many architectural reputations be blasted.

a building there is often something h must be displayed if the proper acter of the design is to be developed. t this something is should be the itect's first thought in making his gn. Often the obligatory feature will large room appearing upon the prin- elevation. This room will be given lows larger, and ornaments richer, those given to the rest of the façade. imits may be defined by the projec- or the recessing of its front wall. It ld not be hidden behind the upper of the entrance portico, nor should rm the middle story of a frontispiece hich the equally enriched upper story ains the caretaker's bedrooms.

the large room appear on a flank or elevation, it may be possible to give ace in the front view of the building mphasising its roof. If it be buried ie midst of the building, this can still etimes be done. It has often, and I k justly, been said that the two es of assembly in the Palace of West- ster ought visibly to have overtopped buildings which surround them.

a hospital the administrative block ld, I think, be the clue to the design; company's offices the board-room. ny building containing an assembly there is unlikely to be any other re which can compete with it for ninence. In all of these the obliga- feature is likely under normal con- ns to be expressed easily enough. e its pre-eminence is assured, the itect must consider which of the ining features of his design to express which to suppress.

have spoken already of occasions on h the architect may reject the sug- ions of his plan and may make his ation "a decorative façade of a purely committal kind." By this phrase ant a façade of which all the features, ther projections or recesses, piers or ings, pilasters or entablatures, justi- themselves to the eye without imply- any external cause of their presence. ill generally be found that there must tretches of such non-committal design in those elevations upon which the e important features of the plan are gly impressed. In these subordinate s the pattern of the pierced wall, which ie external surface of the building, not be interrupted by any extru- s from within. This pattern, however t be chosen scrupulously that it may s well as possible the structure which to cover. There is really no excuse uch practices as that of the brothers m when they veneered blocks of es with façades of which the windows ed hit-and-miss with the party-walls the floors.

seems, then, that an elevation nor- y will consist of what in heraldry ld be called charges and field; that charges should be the architectural ession of important features in the , and that the field should be a back- nd to these—a veil hiding those ires of the plan which we consider ively unimportant. The "non-com- al" type of façade to which I have red will simply be field without ges. The field may be nothing more plain wall, as it is at the Panthéon aris, but it will commonly be pierced with holes in a pattern—that is to say, with windows and doors regularly ar- ranged.

When I said that the decision of what was the obligatory feature should be the architect's first thought in making a design, I assumed that an earlier and more important decision was an integral part of this one—I mean the decision as to what was to be the unit of the whole design, whether a part of a room, a single room, or, as is almost invariable nowa- days, a group of rooms. The group of rooms is our old friend the compound unit, and may be regarded architecturally as a single space divided by walls in much the same way as a cloak-room or changing-room is divided by partitions— that is to say, a divided unit of which the windows are related rather to the whole than to the divisions; in short, a place in which, as one would say colloquially, the partitions had been "put in after." Such a compound unit will also generally be divided horizontally by floors, since its height, if proportionate to its area, will be greatly in excess of the height desirable for its divisions.

The architect, having decided upon his unit, next must determine the obligatory feature in his elevation, must choose which subordinate features he wishes to show, and must veil the rest of his design with a background to these features. A very good way of testing the correct relation of an elevation to its plan is to set up the front wall both in plan and in section, and to produce inwards the lines of all important returns in plan and horizontal projections of cornices in elevation. If the lines thus produced from the plan coincide with those of the important cross-walls, and if the lines produced from the elevation hit off the floors, the plan and the elevation are on good terms one with the other. If fur- ther than this, the silhouette of the roofs and the massing of the ornament reveal truthfully the relative honour and import- ance of the various parts of the building, we may under such conditions affirm absolutely Huyot's dogma that a good plan makes a good elevation.

It appears to me that in the common practice of my countrymen, amid much laudable and successful effort toward rational and harmonious designing, there are two little superstitions in particular which often lead to failure.

The first is a belief in the magical properties of symmetry. If an empha- sised feature occurs at one end only of a building, it must be counterfeited at the other. Why? Symmetry is a good thing if a plan falls symmetrically, other- wise it is vanity. The flank of a building is often naturally unsymmetrical; the human head in profile has not got a nose on both sides. The front and back of a building will normally be symmetrical if the plan is well studied, but two symmet- rical elevations are enough for any build- ing of ordinary constitution.

The second superstition, and the last thing with which I shall trespass upon your patience, is a dread lest the ends of our street façades should look weak. If a plan be divided evenly into bays, there will be between the end window and the limit of the façade only half the breadth of a pier plus half the breadth of a party- wall. This will be sufficient, in plenty, for the profiling of any reasonable window dressings and the accommodation of a down-pipe. In a street building, where our front wall is flush with those of our neighbours, what more can we want? Apparently, to judge from their practice, many architects want a great deal more; they want room for coupled pilasters or for rusticated piers or for some other feature of the kind. In order to secure these massive corners, the spacing of the remainder of the façade is crowded together and dislocated, the windows are placed eccentrically in the rooms, and often enough the end rooms are insuffi- ciently lighted.

Where a building stands free the corner rooms gain light from two directions; it is therefore logical that, since they are doubly windowed, their windows them- selves should be smaller and more widely spaced than those elsewhere in the elevations. In a building joined on either side to other buildings the end rooms have no advantage in lighting over the middle ones, and it seems to me illogical in the extreme to sacrifice their fenestration to any convention in the design of the façades.

The Manufacture of Port- land Cement

Mr. Arthur C. Davis has lectured rather extensively, and we are sure very in- formatively, on the modern manufacture, testing, and uses of cement. His lectures have been heard and highly appreciated both at the University of Cambridge and at meetings of the Royal Society, and he was awarded the Mullins Silver Medal for his treatise read before the Institution of Civil Engineers. Obviously this book, of which this is the third edition, has done even more than his lectures to spread a sound knowledge of the science and technology of Portland cement, appeal- ing as it does to a very much wider public.

To make everything perfectly clear is plainly the author's aim throughout, and that object he achieves with conspicuous success. Mr. Davis gives the definition of Portland cement accepted as authori- tative in Great Britain, France, and the United States of America respectively; and he then summarizes the descriptions in these terse phrases of his own: "Port- land cement is a chemical product obtained by the preliminary mechanical mixture of carbonate of lime with silica and alumina, which, after passing through the succeeding stages of manufacture, results in a combination of silicates and aluminates of lime."

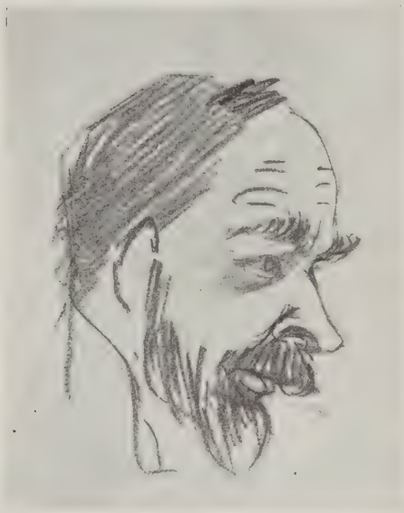
Having shown what cement is, Mr. Davis goes on to describe in detail the processes of its manufacture, and the various appliances, large and small, used in achieving the perfected product.

After the manufacture the numerous and various tests, chemical and mechani- cal, for cracking, for compression, for tensile stress, and so on, are described and illustrated independently of the tests included in the British Standard Specifi- cation for Portland Cement, which is one of the many useful addenda given in Mr. Davis's exceedingly serviceable manual. The book contains also the U.S. and French standard specifications, as well as several handy lists of data.

"Manufacture of Portland Cement." By Arthur C. Davis, M.Inst.C.E., etc. Third Edition, revised and enlarged, with 100 Illustrations. Dublin: John Falconer, 53 Upper Sackville Street. Price 25s.

The Organizers of the Building Trades Exhibition

THERE is always something in a name bestowed by public choice. Thus the name of "The Builder's," by which the International Building Trades Exhibition has become familiarly known, indicates appreciation of the



THE ARTIST.

exhibition's services by architects, surveyors, contractors, constructional engineers, decorators, in short, by experts in all the arts and crafts of the building world.

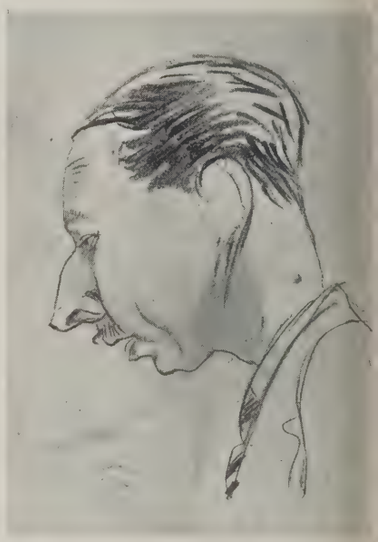
Like its twelve predecessors, this year's exhibition will utter the last word up to date in plant and material. Once more under one roof, one half of the building world will be able to see what the other half is doing. Once more there will be a general tightening up of the bonds of mutual service between all branches of the building trades for the benefit of the whole industry and for the public weal.

That "The Builder's" has been such a progressive and powerful ally of the industry to which it is devoted is largely due to the fact that for over a quarter of a century the directorship has never changed hands. For twenty-seven years the enterprise has been continuously captained by Mr. H. Greville Montgomery, acting in concert with his brother, Mr. Hugh C. Montgomery.

It is always tempting to try to probe the secret of success. In this case part of the secret is revealed by the fact that there is in "The Builder's" such diversity of practical exhibits of a homogeneous character; such trouble taken by individual exhibitors in displaying their goods and giving explanations and advice; such good fellowship existing between exhibitors, organizers, public, and press; and such smoothness in all business and social arrangements and relations. But closer consideration of all this evidence, familiar to us by many years' experience, leaves us upon every fresh occasion of renewing the intimacy, in very much the same state of comprehension as we used to find ourselves in our younger days when the conjurer said: "Now you see how it is done."

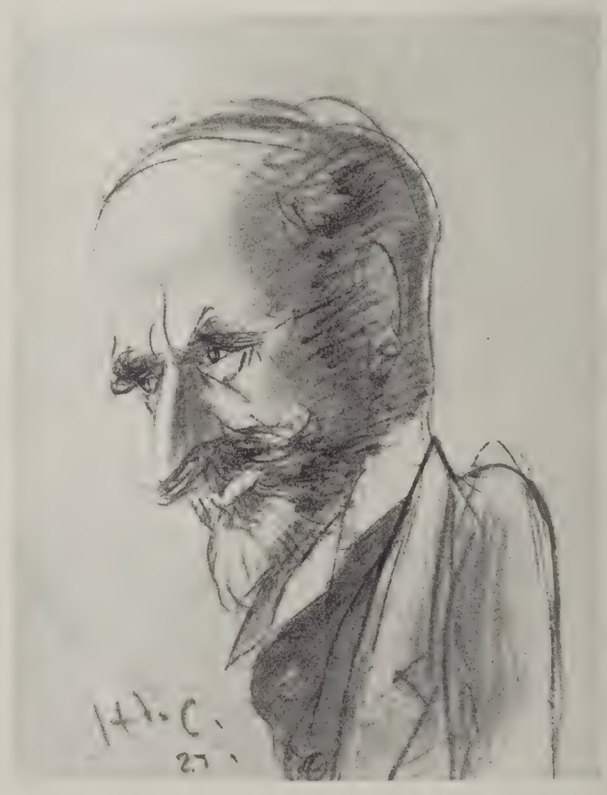
Few people who meet Mr. H. Greville Montgomery for the first time suspect him of being a business man; according, rather, to the consensus of first impressions he is an artist or a politician. True, he is an artist in temperament and appreciation, and he has a creative genius akin to that of the great painter, sculptor, or musician, but finding expression through the more unusual medium of exhibitions. True, too, he is a politician, ex-M.P. for the Bridgwater Division of Somerset. But he is also a remarkably clever man of business, and nature has endowed him with a valuable business asset by making him appear otherwise on first acquaintance. That asset gives him the opportunity of knowing other people long before they know him, of weighing up their character and capabilities before associating himself with them in business.

At an age when most young men are working under a principal's orders he found a way of jointly satisfying the three driving forces of his ambition—becoming his own master, editing his own newspaper, and indulging his taste in building. In 1892 he founded the "British Clayworker," the organ of the Brick and Tile Trades, which he still owns and conducts. As an outcome, the Institute of Clayworkers was inaugurated in 1895; meanwhile he had launched out into exhibition business, once more in the interests of building. His first Buildi Exhibition, in 1895, made history as t first technical show of the kind held this country, and immediately brou him to the fore as an exhibition organiz To the ability which laid the sure found



THE SOLDIER.

tion of a lasting success he has n added many years of experience, throu out which he has continuously gain



THE PRESIDING GENIUS

laurels, widespread popularity, and umerable friends.

'ew people who meet Mr. Hugh C. ntgomery for the first time, or even hundredth time, suspect of him ıg an artist. He is always to be found iis office, from morning till night, first re and last to leave. Rumour has it t in the rush days before an exhibition is also at his desk from night till rning; we can bear witness that we re rung him up towards midnight and eived a reply in as cheery a tone as if were just starting his day's work.

'ertainly he is so much in his element en interviewing, telephoning, or writing anyone who wants to know anything ıut the next Building Exhibition, when ppling with the difficult problem of ing every one the exact position and ount of space desired, when correcting ıofs and making up the guide, when, in ırt, attending to any of the myriad ails he claims for his own special work business manager, that it is difficult to agine he has any other interest in life. t he is an artist of no mean talent, who ıld undoubtedly have made his mark several branches of the profession, ably poster drawing. Moreover, he is ıoet, with a rare gift for good-natured ire. He is, too, a keen connoisseur and lector of old furniture.

We do not believe there is a single exhibitor at "The Builder's" who does not regard him as a friend, and as most of them are regular participants, to the majority of them he is a friend of long standing. To him every exhibitor is the whole exhibition, the hub of its utility, the crux of its success. At every stage of the organization he is ever ready to devote his time and energy to helping further an exhibitor's interests.

The junior partner of the organization is Colonel Hugh R. Montgomery, M.C., son of Mr. H. Greville Montgomery. He is making as rapid headway in exhibition business as he did in the army, which he entered as a private immediately upon the outbreak of war, when still but a boy. His luck is proverbial, and there is no denying that it has provided him, as the son of his father, with an unusually good opportunity for an interesting career. But it needs something more than luck for a young man to succeed in his father's office, particularly when that father is an exceptionally able and popular man, surrounded by a capable staff who have worked with him for years. Colonel Hugh Montgomery has already made himself an acquisition to "The Builder's" and in doing so he has become so popular among both staff and exhibitors that he seems to be growing as essential to the organization as are his father and his uncle.

FOUNTAIN ON STAND OF THE ADAMITE COMPANY, AT THE IDEAL HOME EXHIBITION. MEWÈS AND DAVIS, ARCHITECTS.

Auckland War Memorial Competition

The promoters have received the following communication from a competitor in New Zealand:—

"In the answer to Question 7, I note that the superficial area of the accommodation asked for on the second floor is some 7,000 or 8,000 ft. more than that required on the first floor after deducting the area of the Maori Court, which, of course, is an open space on the second floor."

Upon investigation it has been discovered that an unfortunate error occurred in the requirements as set out firstly in the conditions, and secondly in the disposition of the various halls, etc., set out in the answer to Question 7 of the published answers and questions, in the omission of a hall required for foreign zoology.

Will all competitors therefore kindly amend the answer to Question 7 by the insertion in the schedule, upon the first floor, of a hall for foreign zoology, 130 ft. by 60 ft. This schedule also requires amendment as to first-floor accommodation by the addition thereto of the hall described in the conditions as the central hall or vestibule. This was, however, made quite clear in other answers. With these amendments the discrepancy between the area of the first and second floors disappears.

The promoters express regret for the omission and have taken the earliest opportunity of advising competitors.

The disposition of the accommodation upon the several floors was set out in answers to questions (answer No. 7) with a view of indicating to competitors the disposition desired by the promoters; but, as was implied in the words "as closely as possible," competitors are at liberty within the meaning of those words to vary the arrangement and areas to meet the exigencies of planning and design.

A summary of the conditions was given in our issue for September 7, 1921, together with a plan of the site. A copy of the full conditions may be inspected at the R.I.B.A., 9 Conduit Street, W., where some photographs of the site are also on view.

An Exhibition Fountain in White Cement

The fountain on the Adamite Company's stand at the "Ideal Home" Exhibition at Olympia is built with "Atlas White" cement. It was designed by Messrs. Mewès and Davis and constructed by Messrs. Higgs and Hill, Ltd. The basin of the fountain is made waterproof by the addition of "Colemanite." The "Atlas White" Portland cement and marble chips from which the concrete of the structure is created have been made to represent stone. The basin was watertight twenty-four hours after it was constructed. "Colemanite" (previously known as "Anti-Hydro") is becoming well known as a concrete hardener, particularly in connection with concrete floor surfaces, and has been used in the construction of the retaining wall for the Selfridge building in Oxford Street.

R.I.B.A. Council Meeting

The following notes are from the minutes of the last Council meeting of the R.I.B.A. :—

Unification and Registration. — A statement for the information of members was approved and ordered to be published in the "Journal of the R.I.B.A."

Royal Commission on Greater London. —On the recommendation of a Joint Committee, composed of representatives of the four Standing Committees and the Town Planning and Housing Committee, the Council appointed four members to give evidence on behalf of the Royal Institute before the Royal Commission on Greater London.

The British School at Rome.—Mr. John W. Simpson, Past President, was appointed to represent the Royal Institute for the years 1922–1924 on the Council of the British School at Rome.

The Coal Smoke Abatement Society.—Mr. W. G. Newton was appointed to represent the R.I.B.A. on a deputation to the Minister of Health.

The Architectural Association. — A grant of £100 was made in aid of the funds of the Architectural Association, and an instalment of £125 of the R.I.B.A.s donation to the A.A. Endowment Fund was also voted.

Special Election to the Fellowship.—Mr. William Walcot was elected a Fellow under the provisions of By-law 12.

The Unification and Registration Committee.—The following were appointed to serve on the committee : Messrs. E. P. Warren (F.), Berks, Bucks, and Oxon Architectural Association; Alan E. Munby (F.), York and East Yorkshire Architectural Society; E. T. Boardman (F.), Norfolk and Norwich Architectural Association; T. Aikman Swan (A), Edinburgh Architectural Association; and Mr. Walter Cave (F.).

Beauvais

Mr. H. G. Wicks, A.R.I.B.A., in reading a paper before the Birmingham Architectural Association on "The B.A.A. Excursion to Beauvais," said that the town was full of quaint streets and interesting buildings. The Cathedral, which was the centre of attraction, rose to a great height above the surrounding buildings, dwarfing even the high towers of the Palais de Justice, standing close by. The building, which was incomplete, consisted of a choir finally completed in the fourteenth century after collapsing on two occasions, transepts erected in the sixteenth century, and one bay of a nave. A tower was commenced in 1560, but collapsed twenty-three years later and had not been replaced. The beautiful airy choir was the highest in Europe, rising to 158 ft. from the pavement to the vault; and the transepts, erected in the sixteenth century, were extremely fine examples of the Flamboyant style. The north transept was less crowded with detail than the south transept, and on this account was, perhaps, more pleasing.

Other interesting buildings were the Church of St. Etienne, a large building with Romanesque nave and transepts and a Gothic choir; and the Palais de Justice, formerly the Bishop's Palace, built about 1500. Many old timbered buildings still existed with their overhanging stories, grotesquely carved brackets, and tile filling; and houses of a later date with shuttered windows and richly coloured roofs. When the party scattered some returned home via Paris, and some via Amiens, there taking the opportunity to inspect the Cathedral.

Mr. Wicks illustrated his paper with a number of lantern slides, and there was also an exhibition of the sketches made during the excursion. Mr. Arthur Harrison, F.R.I.B.A., proposed, and Mr. G. Salway Nicol, F.R.I.B.A., seconded, a vote of thanks to the lecturer. The chair was taken by Mr. Rupert Savage, F.R.I.B.A.

R.I.B.A. Colour Competition

The R.I.B.A. have just issued a four-page pamphlet of "Answers to Questions" in connection with the R.I.B.A. Colour Competition, full particulars of which were published in our issue for February 15. The competition—"for a business building, facing on an ordinary London street, in which colour will be the dominant feature"—will be assessed by Sir Edwin Lutyens, R.A., Mr. T. E. Collcutt, PP.R.I.B.A., Professor Gerald Moira, and Mr. William Walcot. Four premiums will be awarded; three (£100, £50, and £20) for the best colour designs irrespective of architectural excellence, and the fourth (£30) for the best architectural design. Appended is a summary of the answers :—

The assessors cannot reply to the question : What kind of marble wears well in London ?

The drawings must bear no motto nor distinguishing mark. Names of competitors should be enclosed in a sealed envelope, which should be sent in as one parcel with the drawings. The drawings will be numbered by the Secretary R.I.B.A. in order of receipt.

No particulars of the "scheme for facing concrete blocks" will be distributed to competitors, and no samples will be sent to Allied Societies for exhibition.

It is admissible to use oil-paint for materials such as ironwork or woodwork —which would naturally be painted for preservation purposes.

The mounting and size of drawings is left to the discretion of competitors. Drawings may be finished in ink or in pencil, but should be mounted on paper boards or stretchers. They should not be sent in rolls. More than one design can be submitted, but there must be no title to the designs.

The main cornice of the building may be placed at fifth-floor level, and the top floor may be made an attic story. If the top of the front wall has to be fixed at 80 ft. above pavement level, it is desirable to show dormers or gables, etc., to one story above 80 ft. The minimum area of lighting space is left to the designer.

The conditions state that "Colour must be suggested by the use of permanent materials only." This does not mean by the use of washable washes such as diluted Indian ink. It will be in order to show the main cornice, say, 2 ft. 6 in. above the fifth-floor line.

The height of 80 ft. as given should be read as to top of coping, i.e. top of wall. One story may be shown above the hei given in the roof if a sloping roof shown. Gables or dormers of one st above 80 ft. are allowed.

Half-inch details of both entrance a portion of top story will be allowed, b no further details, in addition to the la will be allowed to show treatment scheme.

The materials suggested are to marked on the margin of the design. written report is necessary. The elev tion can be on one sheet and details a separate sheet, or all on one. A pri would not be allowed. Only cornic should project beyond the building li There is to be no projection of the w beyond the building line. One story the roof is allowed. It is not permissib to use facing bricks in natural colou supplemented by the materials suggest in the conditions.

The intention of the competition is produce the best scheme for architectur decoration in permanent colour, and design can be arrived at without t careful consideration of architectural pr portion and emphasis, and its suitabili to carefully designed detail appropria to the purpose and construction of t façade in question. But in the case two or more designs of equal or near equal merit, the award would be made the best colour treatment.

The following is a list of the marbles view at the R.I.B.A. and a short descri tion of each :—

Sicilian is a white marble with bluis veins; it is quarried in the Apennine and is the best known and most exte sively used of the white marbles.

Dove or *Blue Turquin* is a marble of blue-grey ground with white or blac veins, and can be obtained in variou shades; this also is quarried in the Ape nines.

Tinos Green is a very hard dark gree marble, quarried in the island of Tinos i the Grecian Archipelago.

Yellow Echaillon is a marble of a du yellow ground, highly fossiliferous, wit fine red markings. This is quarried in th department of Isère, near Grenobl France; it is much used in France, but a present is little known in England.

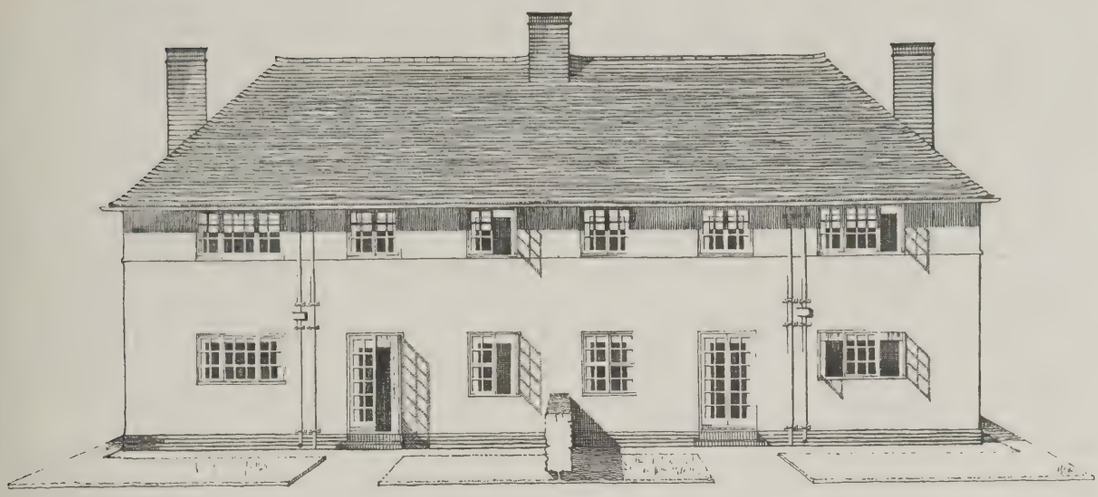
Napoleon is a highly fossiliferou marble of a dull brown colour speckle with lighter brown, and somewhat trans parent in appearance. It is quarried i the neighbourhood of Boulogne, is a ver sound marble, and can be obtained i long lengths.

Lunel Rubane is a fawn-coloured ma ble with thin pink veins; it is quarried i the Vallée Heureuse, near Boulogne.

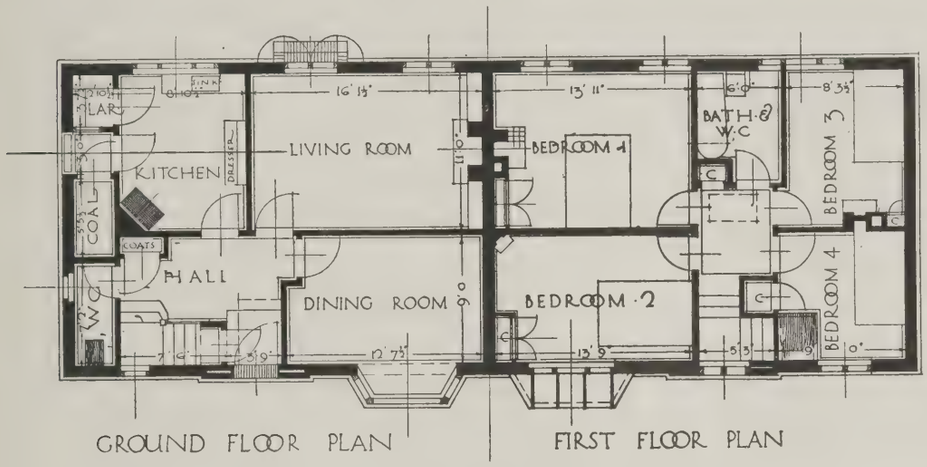
Architectural features, e.g. gables o dormers, or a pitched or Mansard roo are allowed to one story only above th line marked "Top of Cornice" on dia gram. Competitors must keep to th floor levels shown on diagram. The centr line of entrances is a centre line of pas sages, say, leading to a hoist or staircase or direct to a room.

The entrances are shown.

There are no basements, no areas, n chimneys, and no dwarf walls. Th covering of the roof and the span are lef to competitors. Designs are to be con fined to 50 ft. frontage. This is a imaginary site, with, of course, imaginary neighbours. Any features of the cornic may project 2 ft. 6 in. beyond buildin line.



GARDEN FRONT (SOUTH)



GROUND FLOOR PLAN FIRST FLOOR PLAN

ROAD FRONT · (NORTH)

HOUSE AT WELWYN GARDEN CITY, HERTS.
C. MURRAY HENNELL, E.S.I., AND C. H. JAMES, A.R.I.B.A., ARCHITECTS

The Week's News

Building Guild for Bath.

A mass meeting of building trade operatives have unanimously agreed that a Building Guild be formed in Bath.

Regent Street Polytechnic.

Major Worswick, O.B.E., M.Sc., has been appointed director of education at the Polytechnic, Regent Street, London.

University of Liverpool.

The Senate has awarded the certificate in Civic Design to J. R. Armstrong, who was placed by the examiners in the First Class.

£10,000 Gift to Hull.

The Right Hon. T. R. Ferens has intimated his intention of purchasing a site for a new technical college and presenting it to the city. The value of the site is approximately £10,000.

One Hundred New Houses in Poole.

One hundred new houses have been built in the rural district during the past twelve months. At Broadstone and in Ensbury Park large residential districts are arising on attractive and up-to-date lines.

Royal Fusiliers War Memorial.

A site in Holborn, by Brooke Street and Gray's Inn Road, has been assigned by the City Corporation for a memorial to the officers and men of the Royal Fusiliers (City of London Regiment) who fell in the war.

Stockton Municipal Buildings.

The Stockton Corporation are considering the question of providing a set of municipal buildings in some convenient place, and the site most favoured is that at present utilized as the cattle market. It is suggested that buildings which will provide offices, council chamber, and town hall should be erected.

The New R.A.F. Club.

The King and Queen paid a private visit to the Royal Air Force Club in Piccadilly. The premises consist of two houses, formerly occupied by the Lyceum Club, and a large extension on the site of Milton's Yard. They were the gift of Lord Cowdray, and were opened by the Duke of York last month.

The Late Dr. Chalmers.

The death has taken place of Dr. P. MacGregor Chalmers, Glasgow, a member of the Glasgow Institute of Architects, and past president of the Architectural Society. Dr. Chalmers did much church work, and had a wide reputation as a Gothic restorer.

Notable Addition to National Gallery.

The Rt. Hon. Lewis Fry, for many years M.P. for Bristol, had a fine collection of pictures, and one of the gems of the collection was a portrait by Lucas Van Leyden. This picture has most generously been presented to the nation by Mr. Fry's children in memory of their father, and is now on view in Room XV at Trafalgar Square.

Ypres Arch of Triumph.

The plan of the monument in memory of the British Army which is to be erected at Ypres has been submitted to the town council. It will be in the form of an Arch of Triumph. The arch will be surmounted by two lions. The roadway will pass through the arch, on the sides of which will be inscribed the names of the British soldiers who fell in the neighbourhood of Ypres.

The Late Mr. H. A. Satchell.

We regret to announce the death of Mr. Herbert A. Satchell, F.R.I.B.A., at Torquay, on March 15, after a very short illness. The funeral took place at the Woking Crematorium on Monday, March 20. Mr. Satchell, who won the Royal Institute Essay Medal in 1888, had been a member of the R.I.B.A. for thirty-four years. He will be long remembered for his invaluable work on the Practice Standing Committee.

Kitchener Memorial Chapel.

On the advice of Sir Aston Webb, P.R.A., Sir Thomas Brock, R.A., and Sir George Frampton, R.A., the executive committee have accepted the design submitted, in competition, by Mr. Reid Dick, A.R.A., for the sculpture in the Kitchener Memorial Chapel in St. Paul's Cathedral. The architectural work is in the hands of Mr. Mervyn Macartney, and iron gates and grille will be the work of Mr. Bainbridge Reynolds.

The School of Hygiene.

The Committee appointed by the Minister of Health to advise as to the preliminary steps to be taken in regard to the site and planning of the School of Hygiene, which the Rockefeller Foundation have promised to provide, is as follows: Sir Arthur Robinson (Chairman), Sir Frank Baines, Mr. H. H. Dale, Sir Walter Fletcher, Sir William Leishman, Sir George Newman, Sir Cooper Perry, Sir Herbert J. Read, and Mr. H. Meredith Richards (secretary).

Rebuilding the Tubes.

The development and improvement of the London tubes will provide work for about 20,000 men for two years. The work of extending the Hampstead Railway from Golders Green to Edgware will be carried out on the surface, and will take ten to twelve months to complete. The line will be about four and a half miles long. The rebuilding of the City and South London Railway will be completed in about two years at a cost of nearly £2,000,000.

New Sanatorium for South Africa.

His Majesty's Senior Trade Commissioner at Johannesburg reports that, according to the local press, a tuberculosis sanatorium is to be erected at Nelspoort, Cape Province. A start is to be made at once with the first portion of the institution, consisting of a receiving hospital, nurses' home, and quarters for resident doctors and staff. The entire scheme has been designed by the Public Works Department, and when complete will be a modern institution in every respect. The work included in the first part of the scheme is to cost about £53,000. United Kingdom manufacturers and exporters can obtain the name and address of the contractors carrying out the work on application to the Department of Overseas Trade, 35 Queen Street, London, S.W.1, quoting Ref. 7967/ED/PN.

Builders' Settlement.

The National Wages and Conditions Council for the Building Industry has reached a provisional settlement of the wages and hours question. The operatives' representatives have agreed to a reduction of twopence per hour in wages to take place on April 1; a further reduction of twopence per hour operative from June 1 to be submitted to a ballot vote. Working hours for December and January to be reduced to forty-one and a half a week; the alteration in summer hours being deferred until January 192

Henry Saxon Snell Prize.

The Henry Saxon Snell Prize this year will consist of fifty guineas and the medal of the Royal Sanitary Institute, and is offered for an essay on "Improvements in the Sanitary Appliances and Fittings for new Housing Schemes, having regard to Efficiency and Economy." The essay is to consist of not more than 5,000 words to be type-written on foolscap, one side only, and to be illustrated by drawings or sketches. Two competitors may combine in sending in an essay and drawings. Essays must be delivered by August 31, 1922, addressed to the Secretary of The Royal Sanitary Institute, 90 Buckingham Palace Road, London, S.W.1.

Brighton Housing Site.

Mr. Howard Martin, official arbitrator, has issued his award in a claim by the trustees of the late Mr. William Hallo against the County Borough of Brighton. It concerned the Corporation's compulsory acquisition for housing purposes of about twenty-five acres of land known as the Enclosure Estate, adjoining Queen's Park Road. The award is that the acquiring authority is to pay £15,965 and the hearing fee, each party to pay its own costs. On behalf of the trustees the land was valued at £20,000. The district valuer who gave evidence for the Corporation submitted a valuation of £7,500.

Trade Openings in the Netherlands.

H.M. Consul-General at Rotterdam has forwarded to the Department of Overseas Trade some particulars of projected works in the Netherlands, for which tenders are likely to be invited in the near future. The projected works include a modern hospital on the road Sittard-Heerlen, with accommodation for 2[illegible] patients; an asphalt factory on the Merwedekanaal at Utrecht; waterworks, including tower, pumping-station, etc., at Brielle; electrification and extension of the "Gooische Stoomtram" (the line Amsterdam-Hilversum will be the first to be electrified and a power-station and annex buildings constructed); construction of a local railway with annex stations and sheds, from Almelo to Denekamp with branch lines to Ootmarsum and Hengelo; and the building of a shoe and leather factory, etc., on the Keulschevaart, near Amsterdam, and a new tram line with stations, sheds, etc., in Zealand.

idents' Meeting at the R.I.B.A.

he student in London enjoys many antages over his fellow student in the vinces. He has the best of our build- around him, he has the large eums at hand, and access to great aries, but, above all, he is in touch the maturer men of the profession; an at least see them and hear them.

he meeting last Wednesday at the B.A. was held in order that students ht view some working drawings of or two well-known London buildings. here were some working drawings of e Morning Post" building, and Mr. is was there to tell us something it them.

r. Davis is an engaging speaker, and old us a good deal that was inter- ng and instructive. He spoke of the culty of the site. The street running o the left of the corner and on the side h faces the Lyceum goes uphill, and loes the other side which faces the ty Theatre, but the hill on the left is er than that on the right.

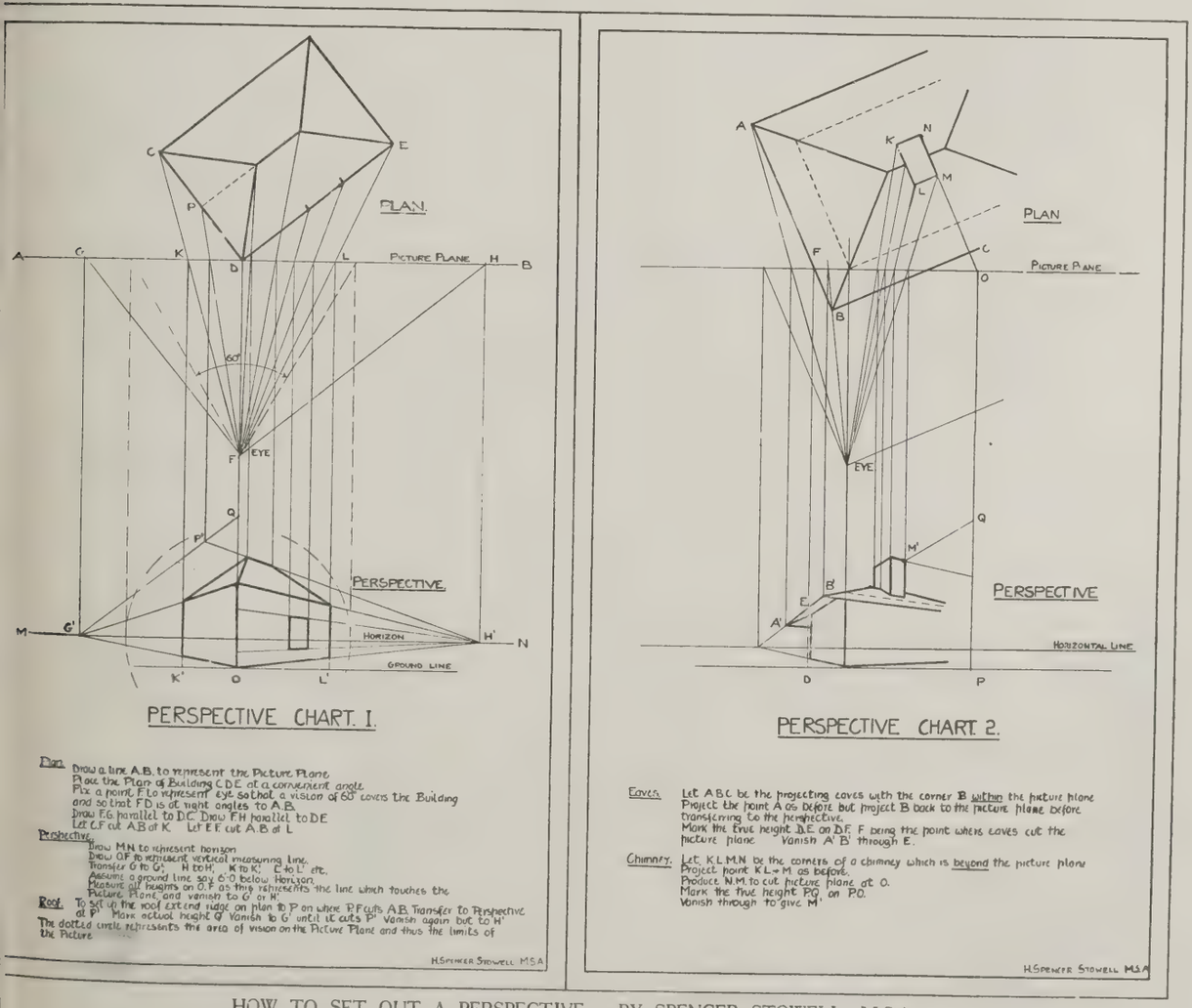
ne placing of the big printing machines he basement, and the consequent e which they require, necessitated very careful thought in the arrange- t of the substructure. The printing nines are so arranged on cantilevers their vibration is localized. It was interesting to note that the building is faced in granite, and this was done on the wish of the clients in the belief that the building would be cleaned once every year or two. This was carried out for a while, and then the matter lapsed, and now the London soot has done its best to make the building a beautiful black. But it is a uniform black, and "The Morning Post" building, black or white, is one of the most refreshing buildings in London.

The working drawings of the New County Hall were fine examples of sound draughtsmanship, but there was too much of them, and too much on them to be taken in on any one comprehensive survey. It would be a good thing if the schools present could have blue prints taken from the tracings to study or refer to at leisure. Amongst the main points of interest explained, the chief was that there is little or no steel in the New County Hall, and this led up to a very interesting discussion, in which Mr. Davis took a leading part, as to the relative soundness of steel-framed buildings and buildings without steel in their construction. Mr. Davis held the view that if we are going to build for all time, to last many generations (and the New County Hall is that type of building), we must leave steel out of the construction. Steel is even now an unknown quantity; it is subject to change and to laws which we do not know enough about. Brick, stone, and timber have stood the test of time; we know their limitations. It is a known fact that excessive vibration causes some physical change in the molecules of the steel, which in the end renders the steel weak and dangerous, and it is likely that ordinary vibration operating over a great number of years has a similar effect. Mr. Davis said the Eiffel Tower, for instance, sways as much as a metre out of the perpendicular under wind-pressure, and sometimes it is not safe to walk anywhere near it because it literally showers bolts and rivets.

As to the fireproof qualities of steel, Mr. Davis cited the Printemps fire of Paris. He said that the steel was actually melted. Even some of the steel which was encased in concrete had not escaped. In that fire the only things which apparently had escaped were some fireproof glass and some cork matting. F. E. T.

The Jones Collection of French Furniture.

The Jones collection of French furniture, porcelain, metalwork, and other objects, has been rearranged in Rooms 65–69 at the Victoria and Albert Museum. A brief guide to the collection, with sixteen illustrations, is being issued, price 6d. A catalogue is also in hand. Part I, dealing with the furniture, was published on the 18th inst., price 2s. 6d.; the other parts will be issued as soon as possible. The collection is now open for the inspection of the public.



HOW TO SET OUT A PERSPECTIVE. BY SPENCER STOWELL, M.S.A

New Inventions

Latest Patent Applications.

5907.—Annison, R. H.—Apparatus for forcing cement, grout, &c., into structures or soil. February 28.

6260.—Bird, H. A.—Production of hard tennis courts, skating rinks, &c. March 2.

6146.—Haskins, A.—Drills for stone, &c. March 2.

5679.—Whiteley, H.—Tools for working granite, &c. February 27.

5704.—Williams, R. C.—Manufacture of concrete, artificial stone, or mortar. February 27.

Specifications Published.

150965.—Lancette, C. J. M.—Reinforced-concrete buildings and other works.

153599.—Lechat, E.—Apparatus for the manufacture of bricks or building-blocks provided with a facing.

175380.—Fischer, O. F.—Concrete buildings and the like.

175500.—Birdsall, J. M.—Chimney-pot or the like which will prevent the down blast of smoke in chimneys or the like.

156233.—Ladd, G. T.—Water-tube boiler settings.

Abstract Published.

173870.—Walls.—Lichtenberg, F., and McCarthy, M., 591 Bellevue Avenue, Yonkers, New York, U.S.A.—Walls and partitions are formed of hollow concrete slabs of story height reinforced with a double wire fabric specially curved. The folded end and the free ends project at the sides, and a through internal air space is formed by a corrugated sheet of paper, asbestos, &c., placed between two flat sheets of similar material. The slabs engage a channel bar at the top and sides and are keyed to an angle-bar at the bottom. Adjacent slabs interlock by the folded ends of the wire fabric engaging in the ends. The joints are then cemented and the wall is plastered over. In a modification, the projecting ends are omitted and the vertical edge of the slab is recessed instead.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the publishe i specifications and forward on post free for the official price of 1/- each.

Coming Events

Thursday, March 23.

Edinburgh Architectural Association.—Annual general meeting of Associate Section.

The Concrete Institute.—"Floating Docks." By Mr. S. F. Staples, M.Inst.C.E. 7.30 p.m.

Chadwick Public Lecture at R.I.B.A.—"Water: Its Storage and Filtration." By Mr. H. E. Stilgoe, M.Inst.C.E.

Friday March 24.

Royal Technical College Architectural Craftsmen's Society, Glasgow.—Business meeting.

Monday, March 27.

Architectural Association. — "The Treatment of Sculpture in Architecture." By Gilbert Bayes. Exhibition, Housing, and Town Planning in Holland.

Wednesday, March 29.

Industrial League and Council.—"The Necessity for Educating the Worker in Industrial Economics." By Major Isidore Salmon, C.B.E., D.L.

Reinforced Concrete Buil- ings for Peru

The Commercial Secretary to H. Legation at Lima, Peru (Mr. F. Manners), reports that a local compa with head offices in the United States, desirous of entering into communicat with United Kingdom firms in a posit to offer all classes of building mater employed in modern reinforced concr structures. The materials required clude Portland cement, steel reinforc bars (both smooth and indented), s wire mesh and lathing, electrical mate and fittings, glass, galvanized iron wa pipes and fittings, composition floori glazed tiles, and electric elevators, elec motors, gas engines, water pumps, The firm are stated to be contractors the erection of a number of buildings behalf of the Peruvian church authorit who, it is understood, are in a positio effect prompt payment for the w United Kingdom manufacturers and porters interested may obtain the n and address of the company referred on application to the Department Overseas Trade, 35 Old Queen St London, S.W.1.

Publications Receive

"Little Houses and How to E Them." With a Foreword by Sir Cha T. Ruthen, Director-General of Hous Price 2s. 6d. net. The Rolls H Publishing Co., Ltd., Rolls Ho Breams Buildings, London, E.C.4.

"Early British Trackways." Alfred Watkins. Price 4s. 6d. net. Watkins Meter Co., Hereford; Simp Marshall, Hamilton, Kent & Co., L London.

"Form in Civilization. Colle Papers on Art and Labour." By W Lethaby. Price 3s. net. Oxford Un sity Press, London.

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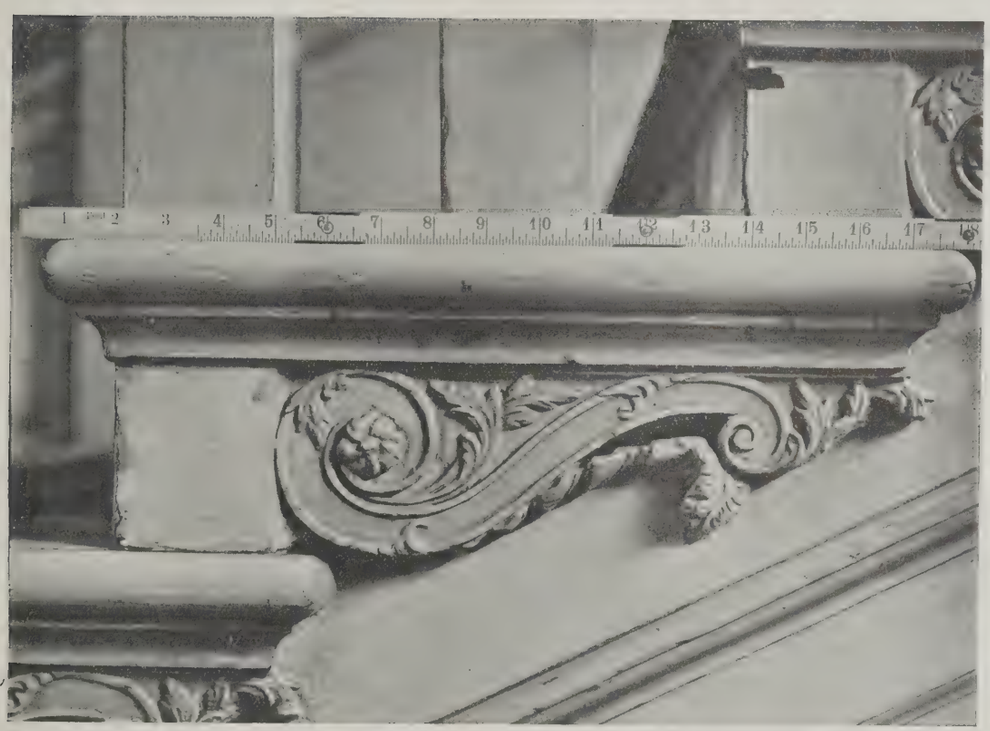
Wednesday, March 29, 1922. Vol. LV. No. 1421

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"



DETAIL OF STAIRCASE CARVING, STATE HOUSE, PENNSYLVANIA.

27-29 Tothill Street, Westminster, S.W.1.

Sculpture. 3.—Equestrian Statue of General Alvear

Antoine Bourdelle, Sculptor

Photo : Roseman

This equestrian statue is part of Antoine Bourdelle's magnificent monument to General Alvear, which includes, besides, a pedestal of polished golden and rose granite, and four bronze corner figures. The monument is 65 ft. high, and is to be erected at Buenos Aires for the Argentine Republic. Bourdelle's handling of the horse's legs—one of the problems of an equestrian statue—is worth careful study.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

dnesday, March 29, 1922 Volume LV. No. 1421

Waterloo Station and Some Others

ALTHOUGH His Majesty the King was prevented by an indisposition—happily very slight—from proclaiming the formal opening of the new Waterloo Station on Tuesday of last week, the ceremony not postponed, the Queen graciously performing it. h an occasion renders topical a brief reference to the nitectural interest of railway stations.

s the latest built of the great London termini, the new terloo Station might, in ordinary circumstances, have n reasonably expected to surpass in most respects its ier compeers. Most of the London termini, designed as y were in the early infancy of railways, were largely ative and experimental in planning and design. Experi- e and precedent were then lacking, but are now super- ndant at home and abroad, and are doubtless reflected mbodied in the new Waterloo.

Nevertheless, when, some twenty years ago, Parliament- sanction was obtained for the rebuilding of Waterloo, as at once evident that the conditions—mainly a matter nvironment—did not preclude the very perfection of ning, but were by no means favourable to grandeur in elevation. Thus much must have been apparent at outset from the most casual glance at the cramped and id surroundings. True, many of these were boldly pt away; but here still the South-Eastern jostles the th-Western, where never the twain should meet; and st unlovely iron bridges and begrimed arches conspire h hovels in mean streets to defy the rudiments of de- um and flout the fundamental principles of town- ning. But the very term "town-planning" was quite nown seventy-odd years ago, when the old station was lt and the district was formed to which it gives its name. Not that the Waterloo district is singular in its sordidness. uld that it were! But nearly always, whether in ndon or in some provincial town, a large railway station xceptionally fortunate if the buildings that it brings) being about it are not collectively an untidy muddle.

Even Charing Cross is not exempt, or Villiers Street has n greatly maligned. Yet the front and the forecourt of station are a goodly heritage from E. M. Barry, though entrances and exits are much too exiguous for conveni- e, if not for æsthetic amenity. Charing Cross Station is, wever, a much better building than most of its critics bring themselves to admit; the most competent judges such matters being prone to underrate it through the judice of a consuming desire to sweep it away; they see t the greatest obstacle to the magnificent town-planning eme that haunts their waking dreams. A first step ards the realization of that dream is the demolition of monstrously ugly railway bridge appended to the ion, which must needs share its fate.

What of the other great London termini? Paddington, vill be admitted, however grudgingly, has in it sugges- ns of the grand manner; and the Hardwicks did well at ston—which, however, always gives one the idea that it its pulling together. With its dignified Doric gateway, large booking-hall, its powerful statue of Robert Stephen- , and John Thomas's not ignoble bas-reliefs typifying some of the great cities that the railway serves—Euston is, on the whole, a station that does not disgrace us in the eyes of the foreigner, a certain largeness and nobility of conception making it exemplary at home and abroad.

Then St. Pancras, with its arched roof 700 ft. long and span of 240 ft., with a height of 150 ft., is at least a remarkable example of the British genius for engineering. The Hawkshaw roof at Charing Cross that collapsed some score of years ago is sufficient commentary on the unwisdom of putting one's trust in the wide-span roofs that made our grandsires "stare and gasp" beyond the classical example of Quintilian—the Charing Cross roof having proved no stronger than its rustiest tie-rod.

That, however, is a question of engineering, and our present concern is with architecture. It has been laid down, with rather blatant assurance, that the design of a railway station is "first a traffic proposition, secondly an engineering proposition, and thirdly, an architectural proposition." There is really no reason why architecture should have been made to come in a bad third, except that the gentleman who arranged this order of precedence to his own satisfaction was, of course, a railway man, who has evidently swallowed whole the ignorant fallacy that architecture is a luxury and an afterthought.

Egregious fallacy as it is, John Ruskin seems to have entertained it. Of the railway traveller he said: "Carry him safely, dismiss him soon; he will thank you for nothing else. All attempts to please him in any other way are mere mockery, and insults to the things by which you endeavour to do so. There never was more flagrant or impertinent folly than the smallest portion of ornament in anything concerned with railroads or near them." What false doctrine to come from an æsthetic philosopher! It is to be feared that this pernicious doctrine has influenced the design of too many railway stations.

But the Americans have broken away from this implicit sanctum of uglification, and have rebounded to the opposite extreme. What Ruskin would have said to the American idea of devising and adorning an ultra-modern railway station in the similitude of the Baths of Caracalla defies conjecture. His most magnificent power of invective would hardly have survived the sight of a string of Pullman carriages coming through a tunnel whose mouth was modelled on the Arch of Titus.

Yet he would have agreed with the modern view that railways are better buried out of sight; that, at all events, in the interests of cleanliness they should all be electrified, and should approach all great cities through tunnels and tubes—a consummation towards which a rapid approach is being made in our own country and in some others.

As to the style in which a railway station is designed, architects, having shaken off the glamour of American essays in gorgeousness, now incline to the doctrine that the structure should be essentially businesslike without ugliness; that it should be neither dowdy nor sumptuous, neither obtrusively Greek nor Gothic, neither Roman nor Renaissance, but as sturdily and strongly British as the genius that invented the Railway.

Notes and Comments

Dr. P. Macgregor Chalmers

When Dr. Rowand Anderson died, Dr. Peter Macgregor Chalmers was indisputably the most distinguished of Scottish restorers of ancient architecture. His restorations of abbeys, cathedrals, and smaller churches, would make a formidable list; and in truth he must have been as industrious as he was scholarly, for when he died with such painful suddenness on March 15, at Merchiston Bank Gardens, Edinburgh, he was not an old man as professional lives go, being but sixty-three. Educated in the Glasgow Secular School and the Glasgow School of Art, he was articled to the late John Honeyman, LL.D., and began practice in 1887 in Glasgow. Very soon he made his mark as a scholarly restorer, and his services for such work were in request all over Scotland. Melrose Abbey and Iona Cathedral were successively entrusted to his care and skill; and while his work—at Iona especially—did not escape criticism, the result of controversy was usually to vindicate the steps taken by Dr. Chalmers, who in a singular degree knew how to reconcile courage with caution. Melrose and Iona! Small wonder that controversy raged about the restoration of such venerable and romantic ruins. No architect, restore he never so wisely, could hope to escape the over-righteous indignation of the ruined shrine worshipper; but all things considered Dr. Chalmers came through the fiery ordeal surprisingly well. Busy as he was as an architect, Dr. Chalmers found time to write several monographs, like those on Glasgow Cathedral, one of which is a valuable addition to Bell's series on the British cathedrals. He had been President of the Glasgow Architectural Association, and of the Architectural Section of the Royal Philosophical Society of Glasgow, and he was a Fellow of the Society of Antiquaries of Scotland.

The Better Way (?) in Mural Decoration

Decorations for imaginary buildings will be admissible to the exhibition of decorative painting and sculpture to be held by the Royal Academy next January. The Academicians, however, by no means desire that the exhibition shall be wholly Academical, so to speak. They want to hear from local authorities who might find it possible to put in hand decorative work; and the London County Council have agreed to place at the disposal of four of the principal art schools of London certain wall-spaces in the County Hall for students to decorate under the supervision of their art-masters. This is practical enough in one sense; yet it is impossible to suppress certain misgivings about subjecting the walls of a great public building to experiments by students.

Architects who were Craftsmen

We note with pleasure that in the very useful discussion on "What can we do with our Sons?" which is attracting so much attention in the columns of "The Times," points of much interest to the architect are by no means rare. Thus, Mr. Maurice Adams, F.R.I.B.A., in recommending that a boy should be taught a mechanical trade, relates some interesting personal reminiscences: "I speak," he says, "from personal experience, having worked at the joiner's bench for two years before I was articled, and the knowledge I gained in builders' yards enabled me to act as a clerk of the works; and as an architect I have never regretted my early practical 'little go.'" He mentions some outstanding instances (familiar enough to our readers) of other architects who were also craftsmen. "The great Victorian church architect, William Butterfield, Royal Gold Medallist, was apprenticed to a Pimlico builder in 1831, and after he started practice worked in a smithy, executing some of his own designs for wrought-iron." Sir John Soane, the son of a bricklayer, had practical experience in building, and many similar examples, past and present, could be cited. There is no doubt of the advantage of such training. Much education can come through t hands. Mr. R. Ingham Clark, of West Ham Abbey, a takes part in the discussion. He appears to think that t education usually given in our public schools is insufficien businesslike.

Death of Mr. J. H. Sabin

We greatly regret to note the death, after a short illn from pneumonia, of the President of the Surveyors' In tution, Mr. Joseph Henry Sabin. As senior partner in firm of Messrs. Smith, Gore, & Co., of Westminster, w are agents for the Ecclesiastical Commissioners and oth similar bodies, he had acquired unrivalled experience all questions relating to land tenures and cognate subje He had therefore many friends and business acquaintan among architects, who were always glad to consult him matters of mutual interest to the two closely related p fessions.

The Smoke Nuisance

Sir Aston Webb, P.R.A., leading the large and influen deputation that waited upon Sir Alfred Mond on March to urge the Government to take early action with resp to smoke abatement, stated his case with much force a eloquence. He declared that the general law with refere to smoke abatement was quite out of touch with prese day conditions. Smoke he described as a demoraliz and unnecessary evil, which "injured the health, depres the spirits, irritated the temper, blackened our wind and deprived us of the sun. It very rapidly destroyed buildings, and of this the Houses of Parliament provi the best, or the worst, example. Works of art are p ticularly subject to deterioration from smoke, and th was also the immense waste of fuel to be considere Although the facts are only too familiar, they have b seldom so ably marshalled. Sir Alfred Mond's reply very sympathetic, and much may be hoped from it; m still, perhaps, from the unabated activities of the Smoke Abatement Society, by whom the powerful representative deputation was organized.

"Shipshape and Bristol Fashion"

The "Bristol Times and Mirror" is one of the comp tively few lay newspapers that display an enlighte interest in architecture. A "talk" by Mr. Stenner at Bristol Rotary Club the other day was the cue for a se of interesting notes. In one of them these pertin remarks are made: "It would, we assure Mr. Stenner quite easy to publish a severe yet just criticism of m of the building in Bristol, which has been done in re years under the direction of professional architects. doubt some of them could put in a plea for mitigatio sentence. Their clients were stubborn or poor, or the l authority was an obstacle to success." These are vital tors, and to "stubborn or poor" an architect would inclined to add, "stubborn and stingy." These are s of the reasons why architects are not tremendously kee "signing" their buildings; there are only too many stances in which an architect feels acutely that the buil is not wholly his, and that the modifications suggeste the client or surreptitiously perpetrated by some irres sible builder are such as would injure the archit reputation if they were thought to be his.

Competitors' Expenses and the Prix de Ro

With reference to Mr. Leslie Rollo's complaint Scottish students are debarred from entering for the de Rome by the cost of travelling to London, we l made inquiries of Mr. Evelyn Shaw, the Hon. Gen. Se the British School, who tells us that there is evide some misapprehension as to the conditions, since travelling expenses of competitors are invariably pai the Faculty. Mr. Rollo will, we feel sure, be glad to l that his criticism has no foundation in fact.

ntoine Bourdelle: A Great French Sculptor

By H. BARTLE-COX, A.R.I.B.A. (Membre corr. de la S.A.D.G.)

WHATEVER our personal tastes, we all admire, though some may fear, the man who has the courage of his own convictions—such a man is Bourdelle.

ated by some, idolized by others, Bourdelle has at-ed a reputation the whole world over. Criticized as e by his enemies and said to be an imitator of primitive esses by the superficial, his disciples acclaim him as greatest living sculptor.

representative exhibition of the master's works has been held in Paris, 13 rue Bonaparte, where, on uary 9, Mademoiselle Dormoy gave an interesting re in the Galerie Povolozky, describing the evolution e great sculptor's mentality. The pith of her comments

1.—ANTOINE BOURDELLE.

to the effect that Bourdelle has gone through three ed phases of inspiration: (1) The influence of Rodin; predilection for the Antique (Assyrian, Ægean, etc.); tendency towards a Romanesque treatment.

ie exhibition was chiefly organized by Monsieur andre Mercereau, the literary director of the French on for the Povolozky publications. This Russian firm ortly to bring out a book on Antoine Bourdelle by é Fontainas, who wrote the short preface to the ogue of the exhibition, in which he says that the nples were chosen by the master himself. Here the ic were able to appreciate Bas-reliefs (L'Epouvante de erre, La Sagesse active), Busts (Madame Jules Michelet, ole France, etc.), Replicas of his Pénélope and of his clès, etc., etc.

nall exhibitions composed of a few statues and parts rge monuments do not do justice to his great ability. sculpture of Bourdelle is now the main theme of all principal art magazines of the world, and besides , his works have been exhibited in Rome, Venice, Berlin, Stuttgart, Dresden, Stockholm, Prague, Warsaw, Geneva, Buenos Aires, Glasgow, Edinburgh, etc. He is the only living Frenchman asked by the Italian Government to supply a portrait bust of himself for the Uffizi Gallery at Florence.

By the long-standing recognition of his technical achievements, his poetic inspiration and prodigious output, Bourdelle is universally and deservedly acknowledged as one of the greatest sculptors of the age. It is therefore to be hoped that, in the near future, a large comprehensive exhibition may be organized of his vast collection of studies, projects, and executed works in their entirety, showing his unique and important position in contemporary arts. London might compete for this honour.

Ideals and Training

"Avoir été proclamé *Bon* ouvrier sera un jour Le Titre Rédempteur de l'homme." Such are the master's words when speaking of Rodin. Monsieur Emile-Antoine Bourdelle was born in 1861 at Montauban (the native town of "Ingres") in the department of Tarne-et-Garonne. He was the only son of his mother, but the sixth of his father, who was a master cabinet-maker. One of his uncles was a stone-cutter, and the others and his grandfathers were all keepers of goats. Agricultural pursuits were the chief occupations of the artist's boyhood, spent in the poetic atmosphere of the Languedocian scenery.

From a very early age he showed a distinct aptitude for drawing. At the age of fifteen he obtained a grant of 600 frs. per annum for three years from the town of Montauban, and with his father went to the city of Toulouse. His engaging personality and marked ability won for him esteem among many notabilities of the district, who early commissioned him to carry out several works of art. The

Languedocian gentry are ever ready to encourage artistic genius, and young Bourdelle came in for his share of patronage, but the advanced political opinions of his family were decidedly detrimental to his rapid success, and for many years he lived in great poverty.

For nine years he studied at the famous regional school of art at Toulouse, and won numerous prizes. In 1885 he obtained a scholarship from the municipality of that town and came to Paris. He passed second in the admission examination for the Ecole des Beaux Arts, and entered the atèlier of Falguière. This training was short-lived, for Bourdelle is no man for set canons unless they happen to coincide with his own vigorous personality. He only remained with Falguière for about three months, but continued, however, to admire his master for the technical basis of his art, and frequently consulted him after leaving the "Ecole."

Bourdelle never competed for the Grand Prix de Rome, and for a man of his strong personality it is undoubtedly fortunate for the prestige of French art that he kept himself free from the tutelage of this administrative institution. Later he voluntarily came under the discipline of his friend and neighbour, Dalou, to whom he owes much, though he is essentially the pupil of Rodin. He is not, however, a pupil in the ordinary sense of the word, but first of all an assistant, then a friend, and, finally, a collaborator. For upwards of fifteen years he worked for Rodin, the greatest sculptor-modeller of the age. Most of the stone carving at the Musée Rodin was executed, through want of time, by assistants, and the marble portrait of Madame Rodin was done by Bourdelle.

"*Nous n'aurons pas de bons ouvriers sans longues initiations.*" Granted; but let the uninitiated be on their guard against accepting this as implying mystery! To understand Bourdelle's position in contemporary art it is necessary to have some comprehension of Rodin's greatness and of his limitations. In certain respects Rodin has never been surpassed by any sculptor the world has produced, in his own particular animal manner, not even by Phidias nor by Michelangelo. Rodin, however, lacked culture and sense of classic beauty, but his analytical power or personal interpretation of the intimacy of his model made of Rodin not the greatest copyist of nature, but the greatest artistic realist known to humanity. He was born the same year as Zola (1840), and, like him, was a materialist. A translator of form, endowed with the qualities of a painter, he was a creator. He was also a lover of the art of movement, in which he specialized.

Unfortunately (or inevitably) Rodin's synthetical tre-

2.—LA TRAGÉDIE (THÉÂTRE DES CHAMPS ÉLYSÉES).

ment was generally confined to fragments. He cared little about the orderly feeling for a decorative ensemble: Rodin was no architect.

What person who has any understanding of art could fail to be impressed by Rodin? Bourdelle holds his master in great respect, and has inherited from him his power of analytical intimacy, which, he says, he uses to a different purpose. He retains his painter qualities; but even though he studied Carpeaux and Rude as well as Rodin, he broke away in about 1900 from dynamic presentation and returns to static sculpture. Bourdelle is more than a modeller or a kneader of flesh: he has a decorative mentality as well and is therefore a designer. He generally imposes on his work an atmosphere of some architectural necessity. Rodin reflected in a masterly fashion the agitation of the age, but Bourdelle reverts to repose.

In 1900 the "Société Manes" held an important exhibition of Bourdelle's sculpture in Prague. Before the opening, the committee inquired of Rodin what he thought of

Sculpture. 4.—"La Force." Monument to General Alvear.

Antoine Bourdelle, Sculptor

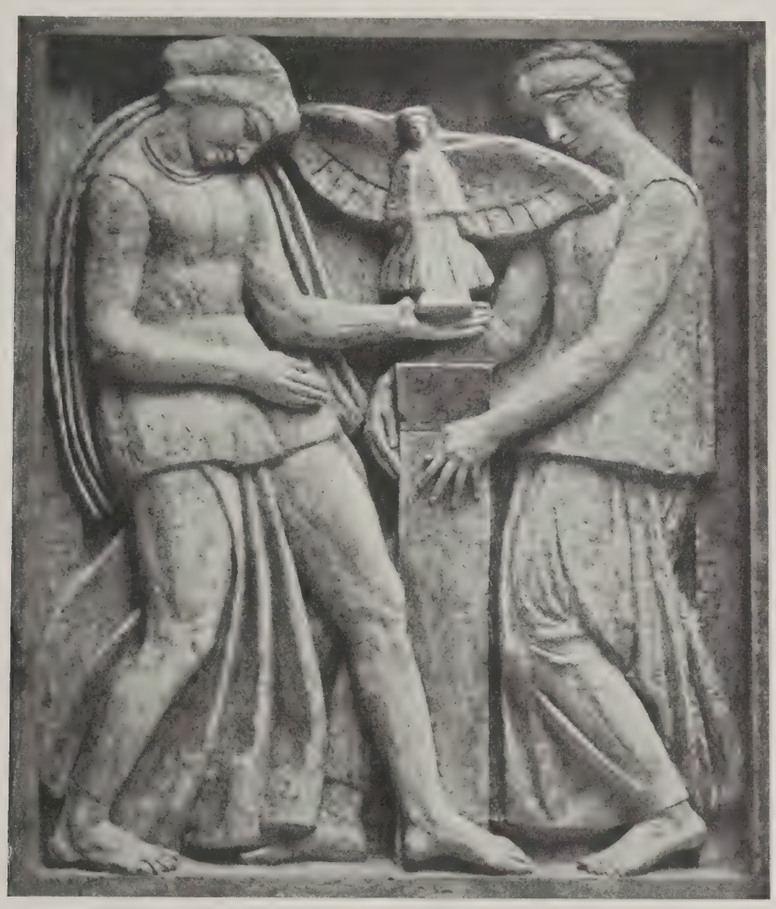
Photo: A. Salaun

The monument to General Alvear has four remarkable corner figures over 10 ft. high, one of which is shown above. This was exhibited at the Salon of 1920. The monument is to be erected on the Plaza Intendente Alvear at Buenos Aires, for the Argentine Republic.

colleague's work. Amongst other comments Rodin "C'est un éclaireur de l'avenir. J'aime sa sculpture, personnelle, bien correspondante à sa nature sensible, tempérament passionné et fougueux. Et j'y trouve certaine délicatesse qui est le propre des forts. pétuosité est la caractéristique du talent de Bourdelle. delle est un Grec de la France méridionale—Quelle antements—quand—j'ai l'occasion de le voir dans son r. Alors quelles trouvailles ! quelle allégresse de er là des modelés que mes études m'ont fait pressentir que voilà réalisés !" For Rodin to say so much of his assistant, arrests our attention. This is a great com-nt from a great man, and places Bourdelle as a worthy nuator of a worthy master !

din worked in a narrower sphere, but in that sphere supreme. Bourdelle has a larger vision, and perhaps Légion d'Honneur. He is Sociétaire of the Salon d'Automne and a council member of La Société Nationale des Beaux-Arts. He is professor of drawing to the Manufacture des Gobelins, and Professor of Sculpture at the Académie de la Grande Chaumière, where he has about fifty pupils, constantly changing, composed of keen students from all parts of the world. His criticisms and talks every Friday morning at this well-known Academy are a veritable delight, pregnant with suggestions for self-development. After following his advice one wonders how it could be possible to chain oneself to any other school of thought.

His teachings illustrate his work. He says : Vibrate, in front of your model, and do it as you feel. Develop yourself ! Do refined classic work if it partakes of your nature, but better a brutal interpretation if it be sincere than a cold slavish attempt at some ideal not fully felt ! Sculpture is



3.—L'ARCHITECTURE ET LA SCULPTURE (THÉÂTRE DES CHAMPS ÉLYSÉES).

ater future. Though sixty years of age, he is still ous and fresh. Despite the fact that he has attained iversal fame, he is ever seeking to develop and perfect leals. One might think that he had arrived at his rity, but be it remembered that Michelangelo lived e age of eighty-nine. At present there is no sign of delle stopping at any formulæ founded by himself. still full of ardent research, enjoys good health, shuns y, is temperate, a non-smoker, and a hard er.

urdelle is a man who lives for art, and though by no s averse to the recognition of his talents he would theless be intensely unhappy to seek official patronage price of artistic independence. He is no great admirer e Ecole, and in his work makes no attempt to flatter aste. He is not a Membre de l'Institut, but has been aded to accept the red rosette, and is an Officier de la not easy, and there is no royal road; some see it one way, and some another. The complete artist has to be a calculator, musician, painter, poet, and architect, must have lived and had experience, and should be capable of expressing devilishness or saintliness.

With all these qualities that help to make up the interest in art, how should it be possible for a model to be seen or interpreted by students with different natures, in any one particular way ? Copy nature faithfully, you cannot ! To interpret or translate it requires years of study. Liberty, is there when you are sure of yourself. Art, arrives when one attains to a personal style through a synthetized individual analysis which is never cold and will vary with every fresh inspiration. The leg of Venus is not like that of Jupiter; Synthesis is not Convention ! "L'art n'est donc pas seulement d'imposer à la pierre des copies d'êtres ou d'objets. L'art est transformation."

An "Architecte-Sculpteur"

In a lecture to students at the "Sorbonne" Bourdelle, in order to explain certain ideals, very aptly assigned to himself the above title.

Bourdelle has designed several monuments of great importance, and unlike many modern sculptors, can design pedestals to fit his sculpture. Being a versatile artist, he understands how to realize a decorative ensemble. Bergeson (the philosopher) is reported to have said of Bourdelle's work that "chaque partie semble contenir le tout." This helps to explain the artistic singificance of the word "synthesis." The whole of a work, however, is necessary to the public for the full appreciation of a part, and that is why partial exhibitions do not do justice to his talent as an "architecte-sculpteur."

Bourdelle has carried out sculpture of the very highest architectural importance for the Théâtre des Champs Elysées (Figs. 2, 3, 5). Monsieur Perret, the architect of the building, says: "A wall should look like a wall. The only legitimate places for architectural sculpture are in those parts where the architecture has no function, such as the metopes of ancient temples." These considerations were imposed upon Bourdelle, who accepted them in the true spirit of a collaborator. Construction must not be hidden, nor ornamented except with the greatest reserve, otherwise decoration will replace architectural synthesis.

Architecture, in itself, is an art, whatever some sculptors might think, and nobody knows this better than Bourdelle, who for a building carried out on pre-renaissance principles would be an excellent "Maître de l'Œuvre," and for the self-same reason the most sympathetic of collaborators for a really modern building. An "architecte-sculpteur" in our days can no longer be a master of the job, he has not the scientific training necessary for the æsthetic creation, yet such would appear to be the ambition of Bourdelle.

In the review, "L'Eventail" (15 January 1919), published at Geneva, Bourdelle in his article on Rodin, says :—

Figures de héros solitaires comme des dieux!— Phidias.

Figures pressentant des mondes!— Michel-Ange.

Figures arrachées de l'homme!— Rodin.

Mais tout cela ce n'est plus nous. Le penseur de demain sera le temple en son entier. C'est l'Heure de Bâtir. Cet art de demain fait de moitié et par l'homme et par Dieu la France en saura voir la source et le Miracle, dans la forêt des Cathédrales."

These are his own words, but the author of this article deems it fit to say : Non ! Non ! cher Maître. The temple of to-morrow will necessitate an æsthetician, and you are too much of an artist. Modern gods are just as jealous as the old. Empiricism is bending under mathematics. Romanticism is being tempered by truth. Stone is being replaced by artificial materials. No ! The miracle of the art of to-morrow will not be found in the cathedrals, [illegible] in Science ! You, as the sculptor of the age, have [illegible] science of art, the which precludes you from the art [illegible] science !

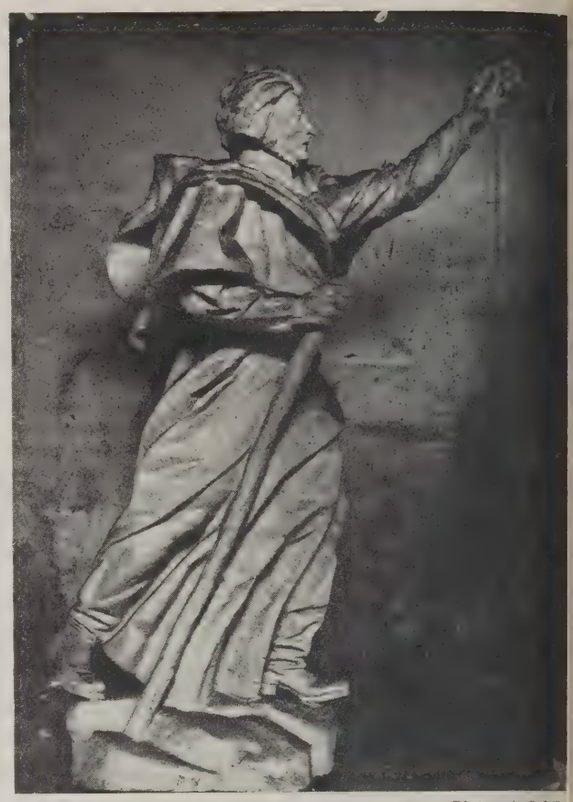


Photo : A. Salaün

4.—ADAM MICKIEWICZ.

The construction and design of a modern building [illegible] beyond the capabilities of a man who has had to spend [illegible] time in developing the technical requirements of a sculpt[illegible] Bourdelle, having been misrepresented as an architect, [illegible] himself been obliged to admit that he cannot aspire to th[illegible] position in the modern acceptation of the word, at least [illegible] buildings where modern methods are employed. [illegible] collaboration, however, would be most precious. In th[illegible] sense he is justly entitled to his own epithet : "architec[illegible] sculpteur."

During the finest epochs of ancient building the æsthe[illegible] of sculpture and architecture were one and the same, [illegible] the complexity of modern life and the advent of [illegible] engineer have completely changed our æsthetic view-po[illegible] Æsthetics apart from art, in the human sense, is a neces[illegible]

Photo : A. Salaün.

5.—PALAS ATHÉNÉ OU LA SAGESSE ACTIVE.

ern distinction, and the two words should not be ounded.

ourdelle is an architect only in the sense that he is a tructor of Form. If he does a statue, one feels the ework behind it. If a portrait, one feels that the ment on the face clothes a skull. If a decoration to ilding, the personal feeling of the sculpture is subser- t to the sentiment of the whole of the architecture. e proceeds, to use his own expression, from analysis ynthesis. There is no synthesis in a statue or bust ss it be carried through from beginning to end rding to some preconceived artistic conviction due careful analysis of the model (architecture, the ramme), which, of course, must be interpreted or e is no art.

delle a mere copyist of archaic methods is to misunderstand his art as well as that of the great epochs.

The primitive artistic sublimity of Gothic sculpture is often completely ignored owing to its heart-felt peasant-like interpretation of sentiment being more accentuated than the facile declamatory realism of the Renaissance. But even with its lack of an aristocratic appreciation for classical physical beauty it was far more architectural and less obtrusively vain than Renaissance sculpture, which became divorced from architecture while it ostentatiously continued to ornament buildings.

Probably architecture and sculpture will never again be synthetised to such a degree of excellence as was possible and even necessary in Europe during the Middle Ages. The two arts were one, and were the only means of express-

Photo: A. Salaün

6.—L'ÉPOPÉE POLONAISE.

e design of a steamship may not be art, but its æsthetics roduced in the same way. Ornament it and the syn- is spoilt, for it does not fit in with its original pro- me. There is no artistic synthesis in a building-with- ng if the architect and sculptor are not one in mind its inception. Rodin was only a sculptor, but Bour- is that and an architecte-sculpteur besides.

urdelle has been inspired from Egypt and from e, and has studied the spirit underlying Rheims and res. He is enamoured with (what to the casual ver appears a mere geometrical pattern) the er qualities in the design and modelling of Assyrian s.

erybody must receive inspiration from somewhere, f tradition has been broken a conscientious artist is tisfied with the age in which he lives. To call Bour-

ing the ideals of the times. Printing had not been invented, and science had not assumed an ideal of its own. Public and private aspirations found a common channel of expression.

An architecte-sculpteur is rare in our times, and the public is beginning to realize that Bourdelle has the most eminent position both as such and as a sculptor pure and simple. Till recently, he has only been appreciated by the intellectual élite, and though much of his work is to be seen in modern museums in different parts of Europe and South America the mass of his production is to be found in private collections. Bourdelle is less interested in local traditions than in universal truths.

As Rodin says of other artists, Corot, Puvis de Chavannes, etc.: "On ne fait pas impunément du bien aux hommes." At a time when France is erecting a heap of common-place

memorials, Bourdelle, whose works have been exhibited in Italy, Germany, Czecho-Slovakia, Poland, The Argentine, Switzerland, Sweden, Scotland, etc., has never received a single "commande" from the State. Nor, except for a very recent enquiry, any French official order since he was about thirty-eight years of age, when his native town commissioned him to carry out the Monument des défenseurs de 1870. This composition over 25 ft. high, was exhibited at the Salon of 1900, and owing to its dimensions was placed in the courtyard facing the Champs Elysées. It is erected near the Hotel de Ville on the Place de la Bourse at Montauban. This work, which has much that is characteristic of Bourdelle, recalls in some respects, Le Départ of Rude (Arc de Triomphe de l'Etoile). It has been much criticised both in Paris and at Montauban, but Rodin, in 1909, was loud in his praise of the ensemble of this monument, which he called truly "épique"—"un des meilleurs élans de la sculpture actuelle." Bourdelle has done much better since, and has been asked to design, in connection with the last war, another memorial for Montauban.

Four colossal compositions by Bourdelle showing his Titanic genius as an architecte-sculpteur are the following:

1. The monument to *General Alvear*, with its four remarkable bronze corner figures and powerful equestrian statue. Plaster models of two of the corner figures (over 10 ft. high) were exhibited at the Salon Nationale (1920) one a personification of "La Force" (intérieur) and the other of "La Victoire." The monument in all is over 65 ft. high. The pedestal of polished golden and rose granite is already on the site, and the whole, at a cost of 650,000 frs., is destined for the "Plaza Intendente Alvear" at Buenos Ayres, for the Argentine Republic. (Pages 456 and 461.)

2. The pathetic monument, about 50 ft. high, to the Polish poet, *Adam Mickiewicz*, for some place yet undetermined in Paris. Parts of this great work have been exhibited at the Salon, and the ensemble is considered to be the *chef d'œuvre* of the Master. It is composed of a massive base supporting a robust column carrying (similar to the Roman rostra) in its flank, an epic interpretation of L'Epopée polonaise staving off oriental invasions. On the summit the poet is represented in a walking attitude with a staff as a prophetic pilgrim announcing the revival of Poland. (Figs. 4 and 6.)

3. The monument *Aux mineurs soldats morts à la guerre 1914–18*, now in course of erection at Monceau-les-Mines (Saône-et-Loire). This was ordered by Monsieur Darcy for La Société des Mines de Monceau, and is being constructed in pierre de Chauvigny. The base shows miners' instruments in haut-relief, whilst at the top is a miner's lantern audaciously enlarged to the proportions of a beacon.

4. A project for a monument of ambitious dimensions dedicated to the *Députés morts pour la France*. The fate of this conception is uncertain.

Of all monuments, inspired by modern war, the two first mentioned are undoubtedly among the finest in the world.

Of a religious nature, La Vierge à l'Offrande, which occupied the centre of the Rotonde at the Salon Nationale 1921, is the Master's most important rendering of Christian worship. This work, which shows the influence of Romanesque treatment, represents Bourdelle's latest phase. The full-length figure of the Virgin, about 20 ft. high, has a delightful architectural feeling, and gracefully holds the infant Christ who stretches out his arms in the gesture of his destiny. It has been ordered by Monsieur Vogt, an artist interested in sculpture, and it is to play a votive role on a most striking site at Niederbrück in the Vosges Mountains. (Fig. 7.)

Paris, is not richly adorned with the works of France's best-known sculptor. He is represented by four works at the Musée du Luxembourg and by two at the Petit Palais. If Bourdelle's great opportunity of embellishing the capital of his own country should never arrive there will yet remain the decoration resulting from the happy understanding of the architect, Monsieur Auguste Perret, with his sculptor in the realization of "Le Théâtre des Champs Elysé (Figs. 2, 3, 5.) Through the advice of Monsieur Gal Thomas and the foresight of Monsieur Astruc, Bourd was commissioned to carry out not only the frescoes, all the sculpture for this highly modern theatre, the really modern building in Paris, heartily disliked at but now gaining tremendously in public esteem. It opened the year before the war, and is to be found in Avenue Montaigne.

The friezes and hauts-reliefs of this most harmoniou daringly plain ensemble, somewhat baffled the Parisi and have met with much adverse criticism. They nevertheless, eminently decorative and essentially ar tectural. Like the sculpture of Jean Goujon on the l taine des Innocents, the figures and the design form a of the whole structure. The sculpture is not a thing ap but is integral in scale, feeling, and execution with architecture itself. The subjects represent Gods Muses, Allegories of Music, the Drama and Comedy, They are executed in marble from the Pyrenees.

If Bourdelle received inspiration from Assyrian, E tian, or Greek prototypes, what better models could he h taken? Besides, with a man of his talent and serious they are something more than theatrical imitation archaic motives. Architectural sculpture from the tim Carpeaux to Rodin has practically been a dead lett France, and Bourdelle, if he reverts to primitive sug tions, is nevertheless a traditional modern of moderns.

(To be concluded.)

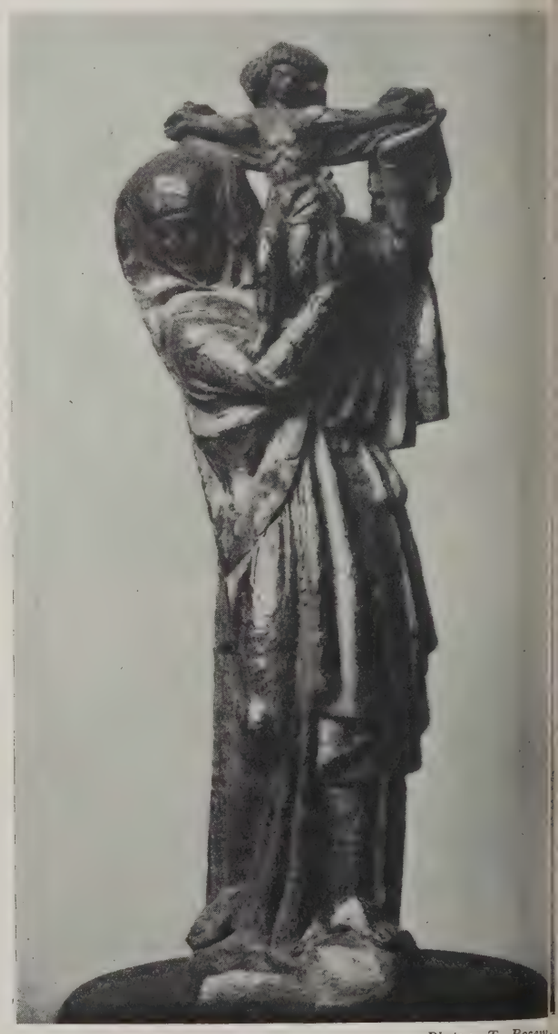


Photo: T. Rosem

7.—LA VIERGE A L'OFFRANDE.

r. Searles-Wood on the Building Timbers of the Empire

s strange that we as a profession ould know so little of woods, and at as a nation we should know ally nothing of them. Mr. Paul house, speaking at the last meeting R.I.B.A., when Mr. Searles-Wood is paper, touched on this gap in our edge of the materials which we use e construction and decoration of ildings.

architect knows more of woods most people, to whom anything s red is mahogany, all that is black ny, and oak is dark brown as it is y old "carved oak" furniture—ten old. We are conservative in all , and our knowledge of woods is hing like our knowledge of cooking. and mutton, mutton and beef; and y of a change roast beef on Sundays. is with woods. Oak and mahogany, occasionally a little walnut, but t is not so fashionable nowadays. e case of beef and mutton we can st say that they are typical British and that they are grown on our but with our woods this is not so, arly all of the oak is foreign, and hole of the mahogany imported. e remarkable partiality of the British ahogany is difficult to understand. ibiquity has failed to spoil it in nglish minds, and its character of nce no doubt pleases us.

ods for decorative and cabinet work n fashions. Mr. Percy Macquoid's is work on the "History of English ture" is divided up into "The Age ak," "The Age of Walnut," and Age of Mahogany." We seem to exhausted ourselves after these so we return again and again to But mahogany has the best of it s the most expensive. Fashion and m truly are powerful things.

view of the high prices of woods, it ortunate that we do not reintroduce greater extent the art of veneering. veneered work of the William and period remains to this day a testi- of its lasting qualities and beauty.

. Searles-Wood's paper was doubly me, for it raised the question of the unknown in British Empire woods, t was in itself, as someone remarked, itome of information on woods to an architect might refer when he ed a few facts in a pithy form.

Timber Committee's Reports

. Searles-Wood, in the course of his , said: The Timber Committee of mperial Institute has been engaged ve years in investigating the re- es of the Empire, during which time s considered over ninety different s, specimens of which can be seen e Imperial Institute. It has selected woods which it has reported as le for the building and furniture s. These reports give a selection e timbers of each of the countries with which the Committee con- s suitable for export to this country. e Committee is careful to ascertain ner the timber can be obtained in quantities sufficient to make a commercial success if introduced into this country, and in several instances careful tests have been made before the selection has been settled.

In conjunction with the Empire Forestry Association it is proposed to bring together samples of Empire timbers in a room devoted to timber exhibits only, so that those interested can see specimens of each kind of timber side by side for comparison, in order that users of timber can ascertain the varying characteristics of the woods from different parts of the Empire, and obtain full particulars of each timber to assist them in making their selection. It is hoped that this permanent exhibition will be used by the public, the success of the Timber Exhibition of 1920 having shown the need of such a collection. It is also under consideration to form a representative collection of those new timbers which the Committee has selected, and send them round to important centres in the country, and our Allied Societies could give valuable help in this scheme. The Conjoint Board of Scientific Societies prepared for the Royal Aeronautical Society a short list of standard names. Such standard names for timbers would save endless confusion, and a complete list should be made and accepted by timber users and the timber trade.

Home-Grown Timbers

The home-grown timbers of the United Kingdom are alder, ash, beech, birch, box, chestnut, elm, silver fir, holly, hornbeam, larch, lime, oak, pine, poplar, spruce, sycamore, walnut, willow, and yew.

With regard to the soft woods, the timbers commonly used and required by architects which it is understood can be grown in the United Kingdom are red wood, white wood, and American yellow pine. Scots pine was the only wood used in many of the ancient Scottish castles, where it has withstood the wear and tear of centuries and remains sound until the present day.

In home-grown oak there are two main varieties—white and Turkey, both of which abounded in our forests in the past. Turkey oak is in many respects similar to American red oak, and is of practically no value. It runs heavily to sap, and is often shaky. In appearance it is more of an ornamental tree, and the acorn cup is spiky—not smooth, like the white oak cup.

Home-grown white oak varies enormously in texture and value, according to the district in which it is grown. For instance, oak from a county like Cornwall is small and coarse, and suitable only for wheelwright's work. Oak from Sussex is splendid, but inclined to be hard. Oak from Northamptonshire, parts of Essex, Suffolk, Oxford, Lincoln, and so forth is of good size and mild in texture. Home-grown white oak is in demand for many classes of heavy work, but it also supplies some of the most beautiful panelling.

For various reasons foreign timber had, before the war, largely displaced that of home growth, and several kinds of wood that had from time immemorial enjoyed a high reputation for strength, durability, and beauty of finish were neglected by architects.

The war created a reaction to a certain extent. Imported woods became scarce, and people who had relied entirely upon them were obliged to use the home-grown products, and they were agreeably surprised to find that they possessed virtues with which they were unacquainted. But the best home-grown timber was comparatively scarce, and, owing to the heavy cutting during the war, the stock of growing timber in the British Isles was never lower than at present. Of many timbers there is bound to be a shortage for many years, but oak, elm, ash, poplar, willow, hornbeam, sweet chestnut, beech, birch, sycamore, alder, pine, spruce, larch, and silver fir are trees that will provide a large quantity of timber for building purposes.

It is essential that the timber resources of the United Kingdom should be increased, but if timber must be grown it must be on business lines, and in time the National Forest Service and the privately owned forests must be self-supporting and capable of producing a dividend on invested capital. To help in this, users of wood should insist on home-grown wood being used wherever possible, and architects are especially asked to see to this when specifying for buildings.

The architect's difficulty in regard to the use of home-grown timber for building purposes is the lack of "availability," due to the defective organization of the home-grown timber market, and to lack of "reliability" due to bad afforestation.

One of the chief points is the defective transport facilities of the country, and until this is thoroughly overhauled perfect organization in other directions will be heavily discounted.

It is essential that home-grown timber should be put on the market in a mature condition, properly graded, and in recognized standard scantlings marked with the year of felling, properly seasoned and of good quality, sold in yards which are well situated for transport, and in sufficient quantity to supply a reasonably large demand.

Reliable estimates should be made of the timbers available in this country for building purposes, and tables prepared for the next fifty years until timber planted now is ready for the market. These tables should be in the hands of every timber merchant. Emphasis should be laid upon the principle of the supply creating the demand rather than the demand creating the supply.

Soft Woods

The question of soft woods is more urgent than that of hard woods. Forests are being depleted in Europe and America, and immature and dead timber is finding its way on to the market in increasing quantities.

The best timber for building purposes is the Scots fir (*Pinus sylvestris*). It grows in the United Kingdom from 60 to 120 ft.

in height, and with trunks 1½ ft. to 3½ ft. in diameter. It is imported from Northern Europe under various names such as red and yellow deal, redwood, and deal with the names of various ports as prefix. The use of the word "fir" in connection with this wood should be discontinued, for it has nothing to do with the tree fir. As this timber is the standard on which the constants in our formulæ are based and the scantlings of the various converted timbers are cut in the search for new sources of supply for soft woods for building purposes, *Pinus sylvestris* has been used as the control for the comparison of strengths. Most of this wood comes from the Baltic and White Sea, and until the European forests are cut more it will be difficult for the Empire timber to compete in price, as freights from Eastern Canada in normal times are from 20 to 30 per cent. more than from the White Sea, 25 to 50 per cent. more than from Sweden, Petrograd, and Riga. From Western Canada freights are more than double those from Eastern Canada.

The great factor in all questions of the use of a bulky and comparatively cheap article like constructional wood is the freight, and even though the Panama Canal has reduced the time a vessel with a Pacific wood cargo on board occupies in her voyage, the difference in the distance the wood has to come will probably curtail the use of it for a long time. When freights become more equal, then the Pacific mills will lay themselves out to cater for the English markets. At present from 1 to 2 per cent. of their output only comes to Europe.

Discussion

The Right Hon. Sir Joseph Cook, High Commissioner for Australia, in moving the vote of thanks, said that in Australia they had a particularly fine kind of teak. Its great quality was that it was impervious to the all-destructive white ant. It was about the only thing that the white ant would not eat. The teak laid on the northern rivers of New South Wales. There was also a great deal of cedar in Australia. The English were a very conservative people. They had been using certain woods for centuries, and it would take them some time to realize that there were other woods in existence. There were many beautiful woods in use in Australia, and quite cheap ones at that. For instance, there was no finer wood for furniture than Queensland maple. But the English, perhaps, were wise in keeping to their mahogany and oak, for those woods were in keeping with their island character. Sir Joseph Cook concluded as follows: "The more I see of you the greater the conviction grows in one that you know a good thing when you see it. But I would ask you to keep your eyes on Australian timbers. High freights and your strong British prejudices—and you have many, you know—no doubt, make you fight shy of them. We are realizing more and more every day the great resources of this vast Empire of ours. An Empire which is so full of everything; everything for its own sustenance and continuity."

Professor Wyndham Dunstan (Director of the Imperial Institute) said that Mr. Searles-Wood had told them that the woods used in the interior fitments of two of their most important public buildings were not British. Surely it was their duty to find out as much as they could about the woods of the British Empire, and to assist in their development. It was the business of the Committee of which Mr. Searles-Wood was chairman to get together information on certain of those woods. Hitherto it was not known in what quantities the woods were to be found, what were the transport facilities, how the woods behaved under seasoning, and what were their characteristics in construction or decoration. A great deal of work had been done at the Imperial Institute, tests had been carried out, and a whole wealth of information had been got together. It had been found that there were many timbers which in all respects were suitable and were really valuable timbers, but owing to great distances freights operated against them, and the result was that those timbers were put to unimportant uses locally; they were, in fact, often burned. They must not forget one important aspect of the subject, and that was afforestation. No source of supply was inexhaustible, and in drawing on a supply it is in the long run more economical to replace what one had taken away than go farther afield to exhaust new stocks. Outside the supply of timber for building and decoration there were usages of timber for other purposes. The chief was the manufacture of paper, which took up a great deal of wood. There was a need for some other materials, and successful experiments had been made with bamboo and various grasses.

The High Commissioner for South Africa said that in South Africa they had originally started on a process of deforestation, and they had suffered heavily in that way. Now the country was embarked on a policy of afforestation. South Africa absorbed most of the supply locally.

Dr. Weller said that blue gum was a very good timber. Woods from Australia were usually branded; that was a practice which should be encouraged. We should be very wary about Indian timbers; the native merchants were adepts at faking timbers. He once had some stuff sent to him as Manchurian oak, which proved to be ash. Austrian oak was better than Manchurian oak. As to teak, the best did not come nowadays from Mulmin, but from Java, but that was outside the British Empire.

Mr. Crompton said that Turkey oak was not such a bad wood; he had used it with success in constructions like pergolas.

Mr. Robinson, in reminding them that the resources of the Empire were adequate for their needs in hardwood, asked: "Where were they going to get their soft woods?" Their main source of supply for coniferous woods was Canada, and the output from that country was gradually drifting into America. Already 90 per cent. was being sent into America, and soon America would be taking the whole of Canada's supply. They would then be forced to turn to Russia and Scandinavia for their whole needs unless they did what they could in Great Britain by afforestation to meet that demand.

F. E. T.

Law Report

Builder's Successful Claim for £2,000

Hooper v. Hodgkins.

March 18. Official Referees' Court. Before Mr. Pollock.

This was an action by Mr. Ja Hooper, of Redhill, builder, against Arthur Hodgkins, described as of W Park Garage, Reigate, to recover the s of £2,024 7s. 6d., balance of a charg £11,268 4s. 6d. in connection with building of a motor garage at Wray P

Early in May 1920, the defend through Mr. David Barry, archit verbally employed the plaintiff to b a motor garage in Holmsdale R Reigate, and plaintiff agreed to do work at a total cost for the erection of building according to the specificat for a sum not exceeding £4,000, he un taking that the charges should be and reasonable, and that the build should be ready for use by Christ 1920. During the progress of the w owing to alterations, the plaintiff siderably exceeded the limit of £4,0 nevertheless, the defendant, early October 1920, paid defendant £6,0 although the garage had not been c pleted. He then asked plaintiff to s definitely what was required to comp the garage and what further sum bey the £6,600 would be necessary. plaintiff stated that it would req approximately another £3,000, according to the defendant it was ag that he should complete the building that further sum, and in order to down the cost he (defendant) gave structions to omit certain items w would represent about £290. The fendant said that plaintiff was enti to be paid £9,310 to complete, £8,775 had been paid before action, a further sum of £425 was paid to pl tiff's solicitor pursuant to an orde Master Valdy, leaving a sum of owing.

The defendant pleaded further that plaintiff had broken his agreement, the garage was not ready for use March 21, 1921, and that he (defend had suffered inconvenience and los consequence. He alleged that the w was done badly, and detailed a nur of alleged defects. It was not admi that defendant's architect had issued certificates to the plaintiff in connec with the building, or that he was author to do so, as alleged in the statemen claim. The defendant counter-clai damages and £84 4s. paid at the req of the plaintiff for putting in the ele installation.

This latter item the plaintiff admi and agreed to have it deducted fro claim.

A great deal of evidence was c on both sides as to the character o work done, the charges made for doi and the quality of the materials used.

The Official Referee, in the result, judgment for the plaintiff for the am claimed (£2,024 7s. 6d), with costs.

A stay was granted with a view possible appeal on the usual terms money to be paid into court).

The New Waterloo Station

ILY those who remember Waterloo Station as it was twenty years ago can fully appreciate the character ıe transformation that has been ht about during the intervening

The Waterloo of the early part century was the most extraordinary ıulation of miscellaneous structures nable. It had grown up piecemeal the year 1848—when the line was ded citywards from Nine Elms—a station of three platforms to one hteen; additions having been tacked ɔm time to time without any idea nforming to a general scheme of ɔpment. The result, in bulk, was peless conglomeration of mean and lerly elements. Actually there three stations—North, Central, and ı—each with its own booking- and so forth. Further complica- were introduced here and there in orm of an overhead footbridge, a crossing, a covered passage-way, us vehicular approach roads of us steepness, and other curious es, utterly mystifying to all but whose painful lot it was to thread ıbyrinth daily.

this hotch-potch has disappeared; to-day Waterloo, a much bigger n, is simplicity itself so far as the lling public is concerned. Access its twenty-one platforms is gained a single concourse, or circulating and the whole station, vast as it is, ɔe taken in at a glance. To the rear of the concourse run the station buildings in one continuous sweep, containing the company's general offices, booking-offices, luggage and cloak rooms, refreshment, dining, and tea rooms, waiting and toilet rooms, the nature of the different compartments being clearly indicated by well-designed lettered signs.

Waterloo is certainly the most cheerful station in London. The mingled red brick and Portland stone of the buildings is singularly restful to the eye, and it is apparent that a real effort has been made to give the place a general air of attractiveness. Two of the more important of the recently completed features of the station—the "Victory Arch" and the Buffet—are illustrated in this issue; but before coming to a description of these we may first give some general account of the work of reconstruction.

Parliamentary powers were obtained in 1899 for the acquisition of the additional land required for a complete reconstruction, but before a commencement could be made with the work it was necessary to re-house those people disturbed by the acquisition of the property. This in itself was no mean task, for the area to be dealt with was densely populated, housing accommodation having to be provided for no fewer than 1,750 persons.

The site was at one time a marsh, so it can be readily understood that a firm foundation did not exist near the surface. In the reconstruction no heavy loads were imposed upon the existing piers or arches, but were taken down independently to the hard gravel, or in some cases to the London clay: this meant excavation to depths varying between 15 ft. and 25 ft. Water was encountered in considerable volume, but was successfully dealt with, and very few claims had to be met for disturbance to adjoining properties due to pumping operations.

The work of reconstruction was carried out both under and over the railway traffic; for instance, to form the entrance from Westminster Bridge Road two spans of the brick arches with the intermediate pier were removed and steelwork substituted, and this under a busy section where the trains entered and left the station. New roofing was constructed over the old, and heavy girders were put together while traffic continued beneath; and it is a source of satisfaction to those responsible for the work that no passenger has been injured nor a train held up during the whole course of reconstruction.

The practical arrangements of the terminus are extremely efficient, as they should be, for they are based upon the best modern practice, representatives of the company having carefully investigated the methods employed on the Continent and in the United States before setting to work upon the design of the new Waterloo. The parcels depot, for example, is beneath the general station level, being connected by electric lifts to the platforms above. Consequently there

VIEW IN REFRESHMENT BUFFET

REFRESHMENT BUFFET IN THE NEW WATERLOO STATION: VIEW OF BAR.

A. W SZLUMPER, C.B.E., M.Inst.C.E., CHIEF ENGINEER.

J. R. SCOTT, CHIEF ARCHITECTURAL ASSISTANT

DETAIL OF REFRESHMENT BUFFET.

is no need for the conveyance of par by means of trolleys across the concou which is a great convenience to the velling public. Indeed, there is as m doing underneath the station as ther above. Many of the arches are occu as workshops, and some serve the pur of wine vaults. Platforms Nos. 1 t are each connected by a short flight steps, midway in their length, to a s way which gives direct access to City and the Bakerloo tube railw This subway is also reached by mean an escalator from the concourse.

The main station level is all under roof except for a small section at northern side, where the roof of the north station has been retained. Of total area of 24½ acres occupied by station no fewer than ten acres covered with roofing, the glazing ha specially designed ventilation which all smoke and steam from the locomotive free and rapid escape. The whole of glazing has been carried out on t "Invincible" system by Messrs. Edgcumbe Rendle & Co. The work been in progress continuously ove period of twenty years, and 1,000 ton glass has been used. The effect of roofing is most impressive over the course, where the complete stretch o mingled with steel lattice girders, can seen from end to end.

The new buffet, which is 79 ft. l 39 ft. wide, and 18 ft. high, is decor in marble and plaster, with mahog counter front and back fitting. The w are panelled in marble to the heigh 9 ft. with Greek cipollino and statu in bays of 11 ft., colour being introdu with rouge marble, set in upper par The centre piers are in fluted Sie with columns in Greek cipollino, th having bronze caps and bases. The supporting fluted columns are also Sienna, with statuary caps and bases, flooring being in squares of Greek cipol and statuary. The upper portion of buffet is in plaster, with Grinling Gibb ornament. The bar, accessories, counter fittings have been designed plain and serviceable manner to facili coping with the heavy business w takes place on the arrival and depar of trains.

The electric fittings, which have b specially designed to suit the decora of the room, have carved and rece English leaf gilt bands, fitted with qu ogee bowls. The chain suspensions from cast ormolu ceiling plates mad match the carving on the bands.

Architecturally the most impo feature of the station is the "Vic Arch," which was formally opened Her Majesty the Queen last week. makes an undeniably impressive entra to the station, and great care has obvi ly been given to the proportions of arch and to the decorative treatm

The frontage is slightly set back f the general line, and the arch, whic of Portland stone with a span of 28 f approached by a flight of stone s The sculptural decorations are t groups, two of which are semicircula composition, placed on the pylons ei side of the arch. The one on the representing War, 1914, has a cen figure of Bellona, Goddess of War. other, on the right, representing Pe 1919, has for its central motive a figu Peace. The panel around the arc

The New Waterloo Station

VICTORY ARCH MEMORIAL ENTRANCE.

Designed by J. R. Scott.

VIEW OF CONCOURSE.

A. W. SZLUMPER, C.B.E., M.Inst.C.E.,
CHIEF ENGINEER.

J. R. SCOTT, CHIEF ARCHITECTURAL
ASSISTANT.

decorated with war trophies, and discs giving the names of different centres of war, the whole surmounted and completed by a central group dominated by Britannia. Under the arch, on either side, on bronze tablets, the names of the 585 L. & S.W.R. fallen are inscribed. From the ceiling are suspended some special electric fittings, having Georgian tied ribbon mouldings in real bronze, fitted with ogee opalescent dishes.

The work of reconstruction has been carried out under the direction of the chief engineers of the company, viz.: the late Mr. J. W. Jacomb Hood, who died early in 1914, and since then under Mr. Alfred W. Szlumper, C.B.E., M.Inst.C.E. Mr. R. D. Hawes, A.M.Inst.C.E., has acted as assistant engineer, and Mr. J. R. Scott as chief architectural assistant.

On the occasion of the recent opening ceremony by the Queen the following gentlemen, among others, had the honour of being presented to Her Majesty: Mr. A. W. Szlumper, Mr. Dudley Bartlett (representing Messrs. Perry & Co., Ltd., contractors for the building work), Sir Guy Wrightson (representing contractors for the iron and steel work), Mr. R. D. Hawes, and Mr. J. R. Scott.

Messrs. Perry & Co. (Bow), Ltd., the general contractors, have surely set up a new record, for during the whole of the period of reconstruction not one life has been lost out of the thousands of men that have been employed.

Messrs. Jackson and Boyce were responsible for the electric-light fittings in the tea-room, refreshment buffet, and under the memorial arch.

The counters and fittings in the refreshment buffet were carried out by Messrs. L. Lumley & Co., Ltd.

The Birmingham Guild, Ltd., carried out the memorial arches in cast iron, with cast bronze clock case and ornaments, the cast bronze memorial tablets with engraved and vitreous enamel-filled inscription and names, and also the wrought and cast iron gateways to the platforms.

Other sub-contractors were: The Luxfer Co. (casements and casement fittings, and patent glazing); Messrs. Fenning & Co. (mosaic flooring, and mosaic decoration and marble work); Messrs. H. H. Martyn & Co. (decorative plasterwork); Messrs. F. J. Barnes (stone generally); and Messrs. Farmer and Brindley (carved stonework).

Fireplaces and Casement Windows

Mr. Harold G. Leask, assistant architect in the office of Public Works, Ireland, has sent us an interesting letter, containing some useful hints with regard to the construction of fireplaces and casement windows. He says: Mr. Edwin Gunn's articles, "Little Things That Matter," are very suggestive, useful, and interesting, and inevitably bring to mind personal difficulties and experiences. His section of a simple fireplace in Article V, however, is one which raises doubts in my mind as to its efficiency.

The fire of wood or turf placed upon a low hearth in a simple opening is a common problem with architects working in rural Ireland, but the question of the formation of flues and "gatherings" is common to all fuels and all forms of fire, and is of general interest. I enclose a sketch section, etc., of a construction which has been found to work very satisfactorily, and a comparison of it with Fig. 17 in Article V will, I trust, be useful.

As I see them—in the light of our large and varied experience in this service—the main points to which attention must be given to ensure good draught and freedom from smoke trouble are as follows and are embodied in the sketch :—

1. A minimum width to soffit of lintel, which, if made wide, causes smoke to come out. (Arches are not satisfactory as a rule.)

2. A contraction of the opening from fire ope to flue at some little distance *above* the soffit level of lintel, which helps to intensify the draught at this important point.

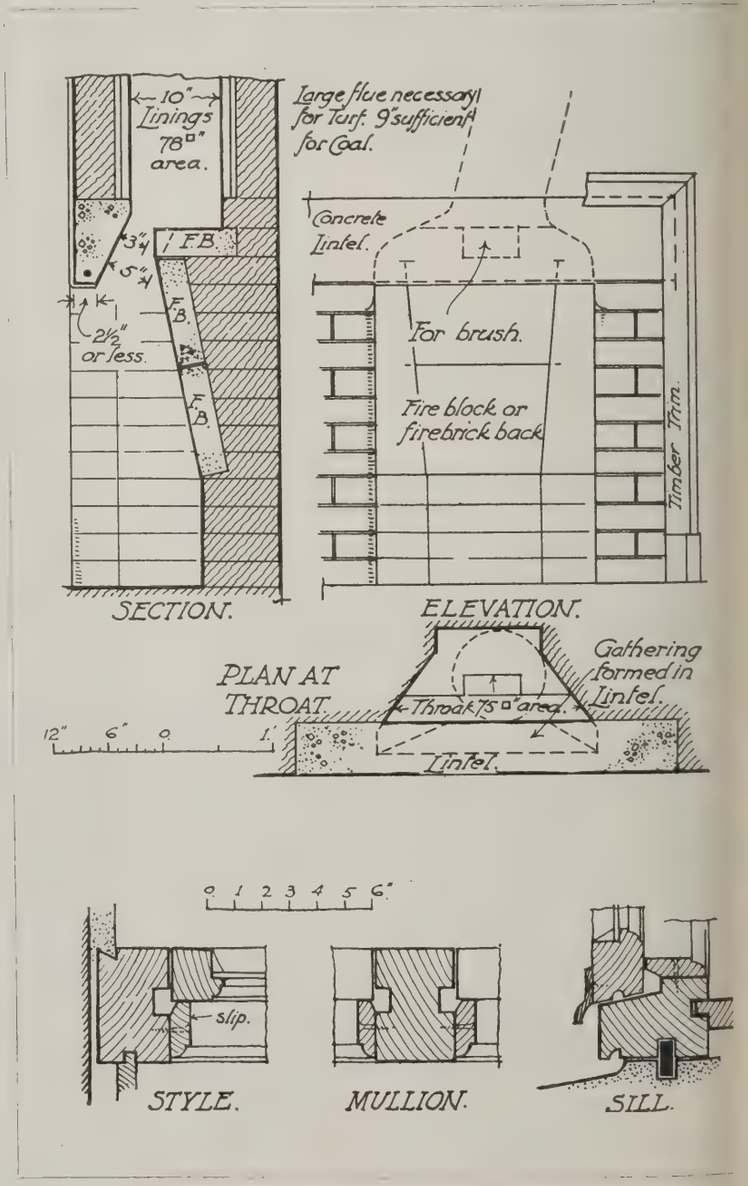
3. A forward slope to the fire-back to ensure quick heating of this surface, which alone when warm serves as a good conductor to smoke.

4. A horizontal "baffle," above the contracted opening or throat already referred to, which will "eddy" any blow-down. A slope in this position is usually fatal.

5. An easy gathering also beginni *above* soffit level of lintel. A qui gathering from soffit level usually cau smoke to come out into room at the t of the jambs.

Wide soffits, straight fire-backs, a gatherings either too quick or caverno have in numerous cases in our experie resulted in smoky and sluggish fires, a have been cured by treatment upon t lines described above.

With regard to casement windows reasonably weatherproof wood ca ment, sash and frame of economi character, is a desideratum. I enclos sketch of one which has behaved v well in exposed situations on the sou west coast of Ireland, a locality specia favoured by Atlantic gales and driv rain. A large groove is essential, and should be backed by a fairly tight in joint. In the style and mullion sect shown the groove can be machined v simply, and the detachable slips or be can be fixed as close up to sashes as possible without risk of sashes becom hinge bound. Should the sash "warp wind" the slips can be refixed as may necessary.



Euston Station, London : The Great Hall

Philip Hardwick, Architect

Apropos of the opening of the new Waterloo Station, the above illustrations of two of the finest waiting a
in 1847, and is founded upon Peruzzi's great chamber in the Massimi Palace. The main waiting hall
but in our opinion, as a piece of abstract design, the hall at Euston is greatly superior to the hall at the
"Monumental Classic Architectur

Pennsylvania Station, New York : Main Waiting Hall

McKim, Mead, and White, Architects

' will be studied with renewed interest. The Great Hall, Euston, was built by Hardwick and his son, ia Station is more or less a reconstruction of the Baths of Caracalla. It is possible that we are biased, n. They are both masterpieces. Euston Hall is reproduced by courtesy of Mr. B. T. Batsford, from ' by A. E. Richardson, F.R.I.B.A.

ication & Registration: R.I.B.A. Statement

following statement has been by the R.I.B.A.:—

Council have been informed that l deal of misunderstanding exists, ılarly among members in the pro- as to the steps that have been in furtherance of the policy of ıtion and Registration, and as to esent situation. They have there- lirected that a short statement be issued for the information of ers.

ill be recalled that ever since the 905 the R.I.B.A. has been pledged olicy of Statutory Registration, and s schemes have been prepared in to enable a Registration Bill to be ted to Parliament with reasonable cts of success. During this period rovincial societies generally have o opportunity of repeating their tion of the urgent necessity for ory Registration, and their anxiety ist in furthering the Registration

the end of the war the R.I.B.A. il were again assured, through the ions of the provincial bodies and h the medium of the professional that the members of the R.I.B.A. the allied societies were as firmly ced as ever of the necessity for ration. At the same time the n was generally expressed that the ation of the profession was an necessity in the interests of ects generally, and also as a means ls the attainment of Statutory ration.

clear that by linking up all sections profession and giving a Central il power to act on behalf of all the of the profession in public matters be enormously strengthened. Not is the question of Registration d, but also all matters of archi- charges, conditions of competition, ations between the profession and bodies, action in legal cases, the tion of professional practice, and ıportant matter of education. It ious that when legislation affecting ofession is dealt with in Parliament, en Government departments seek rvices of architects, a united pro- can exercise influence and pres- hat would be impossible in the e of unity of action. All the com- advice that has been given on the on of Registration by Act of Par- t goes to show that united action ntial to success, and therefore the l are convinced that Unification be the first step.

Council accordingly invited the profession to form a completely ntative body for the purpose of g a scheme for the Unification and ration of the profession. This step ılled with unanimous approval, and mmittee was formed. It contained ntatives of all classes of the Royal te and delegates appointed by the l of every architectural organiza- f any importance in the Empire. ociety of Architects, the Architec- Association, the Official Architects' ation, the twenty Allied Societies United Kingdom, the ten Allied es in the Dominions, the Assis- tants' Union, and the Ulster Society of Architects all took part in the formation of the Committee, and a general meeting of unattached architects also elected representatives. The resulting body of sixty-six members was the most completely representative body of architects of the Empire that had ever come together.

The Committee began its work in July 1920, and after considerable discussion it issued an interim report on May 12, 1921, for the consideration of the Councils of the R.I.B.A. and of the Society of Architects. This report, which had the almost unanimous support of the whole Committee, was, in effect, a recommendation that Unification of the profession should be effected by the inclusion of qualified architects in the R.I.B.A. rather than by the formation of a new and independent outside body to govern the profession.

The Committee requested the Council of the R.I.B.A. and of the Society of Architects to enter into negotiations, and to find out whether, as a first step, a basis could be found for the absorption of the Society into the membership of the R.I.B.A. This is the stage which has now been reached. Committees representing the R.I.B.A. and the Society have discussed a provisional scheme. A Committee representing the Associates is now discussing this scheme in detail with a view to its approval or amendment by the Associates. The Licentiates' Association has been considering how the interests of the Licentiate Class would be affected.

No binding decisions of any kind have yet been made. Alternative suggestions are being carefully weighed by the various Committees, and exhaustive discussion and the consultation of many interests will be necessary before any definite conclusion can be arrived at. It will only be at the termination of these discussions that the general body of the R.I.B.A. will be asked to consider the Council's ultimate conclusions and to give a definite verdict upon them. Before they are asked for that verdict the fullest and most detailed information will be supplied to them, and ample notice will be given of the meeting or meetings at which the subject will be discussed. As the matter is one deeply affecting the interests of members, it would not be fair that the decision upon it should be made at a meeting in London which could only be attended by a very small proportion of the provincial members who form the great majority of the R.I.B.A., and it is the Council's intention to take a postal vote on the subject, so that every member of the Institute will have an opportunity of expressing his opinion.

In the meantime the Council desires to make a special appeal to members to suspend judgment until a scheme has been prepared for their consideration by their own representative Committee, and to ignore the premature agitation which has been set on foot by a certain number of members who are attacking proposals that have not yet been worked out by the responsible Committees or placed before the members.

It is not by the vote of some 6 per cent. of the corporate members at a specially requisitioned meeting in London that this great and complex question can be settled, but by the considered opinion and the deliberate vote of the whole body of members when a scheme is finally placed before them.

It appears to have been rather generally but groundlessly assumed by the opponents of Unification that it implies:

(*a*) the advancement to the full privileges of the R.I.B.A. of all the outside architects of whatever qualifications, and

(*b*) the loss by the Associates of all the prestige attaching to them as possessors of the hallmark of examination.

The scheme of Unification when issued will show how these two points, which are of the greatest importance, are intended to be dealt with.

The A.A. at Kenwood

A large number of members of the Architectural Association paid a visit recently to Kenwood, the seat of the Earl of Mansfield. Kenwood has been much in the public eye of late. Whilst the purchase of the large tract of unspoiled heath for the public is under consideration, the house, it is understood, is to remain private property, and will be converted into a Catholic seminary.

Ken Wood, or Caen Wood, as it was first called, was designed by Robert Adam for the first Earl of Mansfield in 1765, and, like other Adam houses, the severe exterior gives no hint of the wealth of architectural decoration within. Built of stock bricks and stucco, the note struck is a severe one, and the absence of any colour is a loss which time has not helped to correct. Immediately one enters the house the genius of the Adam brothers is felt, and the series of fine rooms, characteristic of the marked style of decoration known by their name, no doubt provided a setting suitable to the spacious times to which they belonged. To-day, when values are so changed, one can sympathize with the owner whose duty it is to maintain such houses. Before many years are passed the glory of the county seats of the eighteenth century will have passed away, and the houses will have fallen into other hands to be used for purposes more suitable to these times.

Of the many rooms seen the "big" room is probably the finest. Designed originally as the drawing-room it has since been converted into the library. It forms a pavilion at the extreme end of the block, and externally is balanced at the western end by the orangery. It is about 40 ft. by 20 ft., and has apsidal ends, and a barrel vaulted ceiling. It is lit by long French windows opening on to the terrace on the south side. The decoration is of panelling lavishly enriched with gilt, and the main colours on the walls are pale tints of mauve and pink. The ceiling, which repeats the colour-scheme, is further enriched with a series of painted panels representing gods and goddesses.

Interesting documents relating to this room were on view, and consisted of receipted bills for the various decorative items. From these one learnt that the series of paintings on the ceiling cost £150, and another stated that Chippendale received £170 on account for the mirrors. It is remarkable to learn that the gilt and colour on the walls are the original decorations, and that periodical cleaning

is all that has been done to preserve them. One omission that one noticed in a house of this size was the absence of a grand staircase. The staircases which were seen were quite simple and unpretentious, and all the decorative features apparently concentrated in the many reception rooms.

The gardens, which were afterwards visited, do not contain any architectural features of note with, perhaps, the exception of a sham bridge placed to complete the vista across the lake which lies on the southern side of the house. Built in timber, it consists of a screen only, and as a theatrical prop it stands a pathetic relic of the days when landscape gardening was at its zenith; when gardening did not try to humour nature, but went all out to improve it.

R. W. S.

The Architect and the State

The following correspondence has passed between Sir Charles T. Ruthen (Director-General of Housing) and the Council of the R.I.B.A.:

"March 16, 1922.

"Dear Mr. President,—Referring to the resolutions passed by the Council of the Royal Institute of British Architects dealing with my address to the Society of Architects, you may have seen in the press my reply to a letter from the Secretary of the National Housing and Town-Planning Council, in which I pointed out that some parts of my address had been entirely misunderstood, and explained the extent to which I intended my criticism of the part taken by architects in the Government housing scheme to apply. You will believe that it was with great regret that I found my words interpreted as throwing upon the architectural profession a general degree of responsibility, and subjecting them to an extent of criticism never intended by me.

"The criticism which I had intended to make was naturally not made without cause; there are unfortunately clear evidences that the Government did not receive in certain cases the help which they were entitled to expect from some of the architects engaged on housing schemes, and much time was occupied by the official staffs in eliminating needless and extravagant provisions.

"I am very willing to meet the Council of the Royal Institute of British Architects if that be their wish. I could do so if invited on March 20, or at the following meeting; but in view of the explanation which has already been published, and my reiterated desire that architects may continue to be associated with housing work, perhaps you may feel, as I do, that no good purpose will be served by embarking on a discussion of the extent to which certain architects proved to be inexperienced in a special class of work and thus added a quota to the already inflated cost which had to be contended with. In any case I need scarcely assure you, as Director-General of Housing, of my recognition that in many cases architects loyally assisted the Government in their struggle for economy, and of my entire goodwill towards the members of the Institute and the architectural profession generally.

(Signed) "CHARLES T. RUTHEN.

"Paul Waterhouse, Esq., P.R.I.B.A."

"March 22, 1922.

"Dear Sir,—The letter which you addressed to the President R.I.B.A. under date March 16, 1922, was laid before the Council on the 20th instant, and by resolution then passed I was directed to say in reply—

"(1) That in thanking you for your assurance that parts of your address had been misunderstood the Council specially welcomes your explanation that you had no intention of 'throwing upon the architectural profession a general degree of responsibility.'

"(2) That they receive with satisfaction your recognition of loyal assistance rendered by many members of the profession in the national struggle for economy.

"(3) That while naturally pledged to continue to deal, as in the past, with all questions requiring disciplinary action within the ranks of their own members, they concur in considering that a further discussion on the lines to which you refer is unnecessary.

(Signed) "IAN MACALISTER,
"Secretary,
"Royal Institute of British Architects.

"Sir Charles Ruthen, O.B.E."

Building Wages and Hours

The National Wages and Conditions Council for the Building Industry, at its meeting on March 17, considered what variation in wages payable to operatives engaged in the building industry should be made to meet the abnormal conditions prevailing; consideration was also given to the question of the length of the working week. The Council resolved:—

"That a reduction of twopence (2d.) per hour shall take place on and from April 1, 1922, and a further reduction of twopence (2d.) per hour on and from June 1—both reductions to be on account of future adjustments rendered necessary by the operation of the Sliding Scale Agreement.

"The working hours for the months of December and January to be reduced to 41½ per week, and the further consideration of the alteration of the summer working hours to be deferred until the January (1923) meeting. In the event of failure at that meeting to agree on the question of the length of the working week, the employers' present position as respects that question is not to be prejudiced. The operatives to have the opportunity of confirming the second reduction above mentioned. In the event of the operatives failing to agree to the second reduction, the employers' present position with regard to the working hours is to remain unprejudiced.

"In the application of the second reduction special consideration to be given by the Council, or a Committee thereof, to the mitigation of the incidence of the reduction upon the wages of the lower-paid districts, and especially where the hourly rate of Building Trade Labourers would be reduced below the rates obtaining under the Civil Engineering Awards."

A. G. WHITE,
Employers' Secretary.
R. COPPOCK,
Operatives' Secretary.

A. J. LLOYD,
Clerk to the Council.

Little Things that Matter.—X

By EDWIN GUNN, A.R.I.B.A.

Soil Pipes.—How often is a house of otherwise pleasing appearance sa marred by the ostrich-like habit of p tending that soil and ventilating pipes invisible, or, at any rate, omitting th from the elevational drawings. Th should be just as much planned for any other component, and a posit adjoining a chimney or in a re-entr angle is usually not impossible to att It should also be remembered that wh there are dormer windows it will proba be necessary that the ventilating head the pipe should be carried above, wh makes it still more imperative to th this matter out in advance.

Bath Wastes.—Who invented the pleasant practice of making bath a lavatory wastes on upper floors discha into rainwater heads? They are in cessible collecting grounds for decay soapsuds and fat. It is much better pick up these lead pipes by double junctions on the iron waste, the l branches being inserted in the s inlets and jointed with red lead. A v rose should be fixed above the main p to ventilate the down pipe and prevent discharge by one branch from syphon the other trap.

Condensation.—Since the days of tempered walls the evils of condensat have been very prominent; wall-pa having an absorbent surface is, of cou not subject to this trouble. It is pretty commonly known that the may be mitigated if, in place of the tomary smooth finish of the plaster setting coat, a granular or gritty fi from a wood or cloth-faced float is tained. It might be thought that su surface would more readily become sc and dirty than the smoother set c Experience over some years has convinced me, however, that this is not It seems probable that the explanati that most of the dust and dirt w adheres to a distempered wall does when it is covered with beads or ru of moisture by condensation; get ri the condensation and the dust, the present, fails to stick.

Ceilings.—A similar gritty finish is more pleasant in effect on a ceiling. a free sweeping action of the arm is m tained, with a good pressure in scou the finishing coat, almost an egg polish can be obtained. This give pleasant a surface that any further t ment by whitening or distemper is necessary. This texture is singul suitable in conjunction with oak be or panelling.

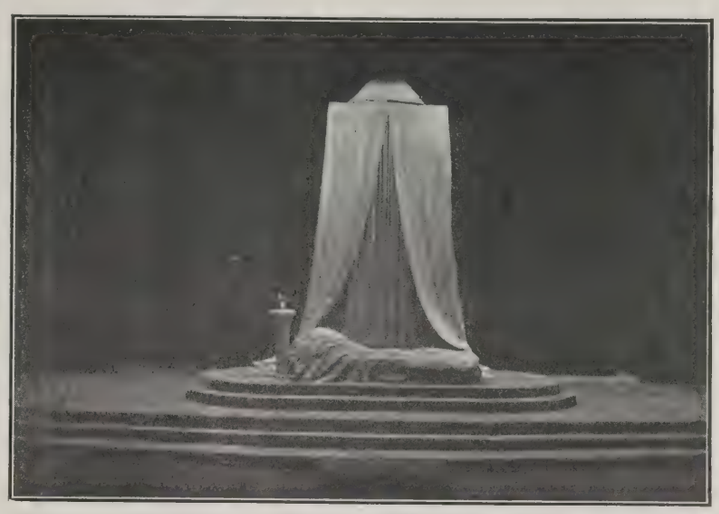
Postscript.—The author makes claim to anything sensational in matter of the foregoing notes. Som the expedients are very old ones, s are possibly new, and these latter ar all of his own origination. He bel that every architect who strikes avoids a "snag" ought to open matter to his fellows. Quacks sec scientists publish. *Verbum sap.*

Magazines of the Month*

A Literary and Pictorial Digest

HE ENGLISH REVIEW for March includes a very interesting number of THEATRECRAFT, which deals exclu- with the International Theatre Ex- n at Amsterdam. This exhibition pened by Gordon Craig on January id is now, we understand, being erred bodily to South Kensington. rst room is devoted to the work of n Craig and Adolphe Appia; the l to the English exhibits; the third American; the fourth to work from .. Sweden, France, and Belgium; th to Dutch; the sixth and seventh man and Austrian. The eighth, a ied room, contains lit-up models nany countries; the ninth, which rs a collection of books on the e, acts as a lecture-hall. Hermon ias an article entitled "Amsterdam . and the Play," in which after ig that Realism in the theatre is g to make way for Expressionism, views the work of the various ies represented. "Outside Ger- and Austria," he says, "America to be the only country not resisting w broom which is sweeping both and decorator away," and "prob- ie most interesting worker in the an theatre is Mr. Robert E. Jones," designs are on exhibition at the Leigh Gallery in London. Sim- and "expressionism," which dis- hes the German school from all is represented by F. X. von Scherl lain yellow interior with a rect- r erection built up of red cubes in ntre, and another black interior right red jagged spikes springing staccato fashion in the foreground; he Dutch rely more on "careful anship, delicacy of conception and

above magazines may be seen in the Reading 29 Tothill Street.



STAGE SETTING FOR THE LAST ACT OF "OTHELLO." BY EMIL PIRCHAN.

(From "Theatrecraft" in "The English Review.")

execution, and unimpeachable good taste," like ourselves. Shakespeare has received the closest attention from designers in all countries, and the illustration above shows Emil Pirchan's setting for the last act of "Othello," which is a dramatic piece of work. "It will be seen," says Mr. Ould, "how admirably its simplicity lends itself to rapid action." Architects are anticipating with interest the opening of this exhibition in England.

The current ARCHITECTURAL REVIEW contains photographs of the last commission carried out by the late Ernest Newton—a war memorial shrine at his old school, Uppingham, which is illustrated on p. 482. An appreciation of the famous architect is written by Professor Lethaby. There are also illustrations of the remodelling of Vernon House, St. James's, by Sir Ambrose Poynter, Bart. This large town residence, which was recently bought from Lord Hillingdon by the Overseas Club to use as a club house, the writer of the article remarks, has a history which dates back to the early part of the eighteenth century, though little evidence of this now remains except in the thickness of the walls. The house faces down Park Place, and has its own entrance gates and courtyard in front, while at the back is a private garden adjoining the Green Park. There are two splendid rooms overlooking the Green Park. One downstairs has fluted columns and a rich marble mantelpiece. Upstairs the old drawing-room, with its panels of rosy silk brocade framed in gilt, is now a lounge. Our illustration on p. 482 shows the boudoir, a room elliptical in shape and rich in ornament. One of the late Alick Horsnell's etchings accompanies an article by "W. G. N." on "Verona," which can be read with delight "out of (or in!) office hours." "The Scottish Survey," the first volume of which has now been completed, is dealt with by Mr. Theodore Fyfe, and is illustrated by several striking examples of work "north of the border."

COMBUSTION ENGINEERING BUILDING, BROAD STREET, NEW YORK.

(From "The American Architect and Architectural Review.")

Under the title "A New Disease in Architecture," Sir Theodore Cook strikes hard at the Hambidge-Lund school in the March issue of THE NINETEENTH CENTURY. The use of the Golden Section, he says, to "explain" beauty in architecture "has apparently burst out into a sudden and devastating disease," the latest manifestations of which are Mr. Jay Hambidge's monthly theories in "The Diagonal" (published by the Yale University Press), and "'Ad quadratum:' A study of the Geometrical Bases of Classic and Mediæval Religious Architecture," by Fredrik Macody Lund, which was reviewed in a recent number of the JOURNAL. "A *line* can be divided into two parts in a great many ways; one way is known as

the Golden Section." This is as old as the hills, but Mr. Hambidge appears to think that he discovered it. It can be obtained in the following manner: "If AB is the line to be thus divided, draw BC at right angles to AB and exactly half its length. Complete the right-angled triangle by joining AC. With C as centre and CB as distance, describe a circle cutting AC at G; with A as centre and AG as distance, describe a circle cutting the line AB at D. This point D gives you the Golden Section." The Golden Section, in fact, is another name for the Extreme and Mean Proportion, for if you speak in terms of the line AB, the smaller part (BD) is to the larger part (DA) as this larger part is to the whole. "Mr. Hambidge has an especially virulent form of the disease," says Sir Theodore Cook. "He applies the ancient proportion, with its simple geometrical derivations, to questions of area (as distinct from line and measurement) . . . . and we actually read, concerning one of these areas, that 'this root-five rectangle is the basic shape of vegetable and animal architecture, and is the form which has solved the mystery of the perfection of classical Greek art.'" Dr. Lund's particular symptoms of the disease, on the other hand, "are the Square and the Pentagon. . . . In Vol. I, chapter viii, p. 129, he begins his own sonorous and extended pæan on the same extremely antiquated Golden Section (continued to p. 197)." But as a matter of fact nature and art are not mathematical. "Mathematics are not an end in themselves, as Mr. Hambidge and his friends seem to think. . . As Mr. A. B. Walkley pointed out in 'The Times,' 'Whatever rectangles Mr. Hambidge may discover in Greek works of art, he will not ther have revealed the secret of Greek For rectangles are physical facts (w they are not mere abstractions), and is not a physical fact, but a spiri activity. It is in the mind of the ar it is his vision. . . .'" "Mr. Hambidge and Dr. Lund," proceeds Theodore Cook, "say that beauty life) *are* susceptible of exact (and simple) measurements. . . . I they are entirely wrong in theory. . I say that the exactly mathema Pyramid is a mere triangular mas stones, whereas in the beautiful Par non there is not a single simple and e measurement to be found; it is as fu variations as a live flower or a she full of delicate divergencies from du dead exactitude. . . . It is no aggeration to say that there are simple and exact measurements in Parthenon whatever, for . . it exh constant differences from rectilinea angular exactitude, partly owing to curves introduced for definite op reasons, partly owing to some even subtle understanding of the value slight divergence from 'expected' meas ments." No. "There is a transforma of energy involved by the operations o brain and will, which is beyond formulas. The baffling factor in org objects is their life. The baffling f in masterpieces of creative art is beauty—a quality which depends more than growth depends upon mec cal reproduction or exact copyin quality as essential and intangible as and exhibiting all those subtle variat those individual divergences from upon which Charles Darwin la founded his great interpretation o origin of species and the survival o fittest."

INTERIOR OF PORCH OF HOUSE ON LONG ISLAND, N.Y.

(*From "The Architectural Forum."*)

THE WOLFF TELEGRAPH BUREAU, BERLIN.

(*From "Moderne Bauformen."*)

THE CONNOISSEUR for March inc articles on Jacopo Bellini, "Primæva in the Twentieth Century," "M Decoration: Some Work by Ma Gloria Silva," "A Paul Lamerie Service," and "Some Early Pr Papers," in which it is stated tha custom of hanging walls and lining with patterned papers was estab early in the sixteenth century.

THE BOUDOIR, VERNON HOUSE, PARK PLACE, ST. JAMES'S
REMODELLED BY SIR AMBROSE POYNTER, BART, F.R.I.B.A.
(*From "The Architectural Review."*)

The current ARCHITECTURAL ASSOCIATION JOURNAL, amongst other things, deals with the London County Hall; GARDEN CITIES AND TOWN PLANNING has an article on Richmond and notes on "A Constructive Housing Policy"; and the JOURNAL OF THE LONDON SOCIETY deals with "The Mercers' Company: their Hall, and their Plate."

The AMERICAN ARCHITECT, New York, for February 15, devotes most of its space to the Exhibition of the Architectural League of New York. Of the three principal architectural societies in New York, says H. Van Buren Magonigle in the Foreword, the New York Chapter of the American Institute of Architects . . . restricts itself primarily to the sphere of professional practice, while the Society of Beaux-Arts Architects, which devoted itself originally to the education of the architectural draughtsman through the *atelier* system, now, through a natural offshoot—the Beaux-Arts Institute of Design—has extended its influence by the inclusion, in New York, of painting and sculpture, and the arts of design in general. "A fundamental difference of structure distinguishes the Architectural League membership, as it is not confined to architects or to architectural draughtsmen. It is as its name implies and suggests, a league, under architectural leadership, of the arts, professions, and crafts contributary to the art of architecture. The membership includes architects, painters, sculptors, and designers in all the crafts . . . During the past seven years the League has awakened to a realization of the fact . . . that since architecture is inclusive of every art that ministers to the comfort, convenience, and comeliness of life, an architectural exhibition should probably include, not merely drawings and photographs of buildings, but those movable parts of buildings such as lighting fixtures and fireplace fittings, hangings and fabrics of all kinds, carpets, pottery, tilewo leather, etc. Therefore the league adopted the policy of exhibiting, side side with architecture in drawings, pho graphs and models (with mural paint and sculpture), these actual products the allied crafts, frequently creating architectural setting in which they mi be naturally displayed." But the lea is more than an annual exhibition. has developed into a club—"one of most interesting clubs in the country" with a club night, a dinner once a we and a ladies' night once a month. "A weekly dinner an architect may seated in a group composed of a mu painter, a sculptor, a worker in me either as designer or craftsman, a ma facturer of glass or fabrics, a decorato pottery or tile or faïence expert, a desig and maker of stained glass, or a bro founder . . . And in this personal c tact, with all its implications of me exchange, in the friendships which sp up among practitioners of div branches of art, is more hope for be craftsmanship and architecture than many medals." Amongst many il trations of the works on show at exhibition we reproduce a view of lower part of the Combustion Enginee Building, Broad Street, New York.

The same paper for March 1 incl articles on "Architectural Educati the "Beaux-Arts Institute of Desi and illustrations of some domestic w and war memorials.

The February ARCHITECTURAL FOR Boston, contains articles on "Electr Wiring Lay-outs for Modern Buildin Part II, "The Use of Liquid and Fuels in Heating of Small Buildin "Exterior Concrete," "What is Method of Charging for Professi Service?" "Baroque, Justice, and C mon Sense," and "English Geor Decorative Precedent," in which Early Georgian domestic interior 1720–60 is treated of by Stanwood Mac ber. This article is accompanied some charming illustrations of cur American work in the Georgian mar notably that of the interior of a hou Long Island, New York, which delicate yet striking piece of design, is reproduced on p. 480.

The current PENCIL POINTS illustr competition designs for little garden addition to its usual features on "A tectural Detail," and "The Study Architectural Design."

The February CONSTRUCTION MODE illustrates Beaux-Arts designs fo cabin salon.

The most interesting thing in February issue of MODERNE BAUFOR Stuttgart, is the building for the Telegraph Bureau, in the Zimmerstr Berlin (p. 480) by Hans Jessen, w according to the writer, marks a step forward in the developmen Jessen's art. Here, says the write has "found himself." The propor are sound and true, and are well expr by the broad iron plates and framing by the severely plain window-fra The three upper stories grow organ out of the tower, their vertical springing upwards harmoniously. whole building shows forethought do the smallest detail. The frieze and mental details are after designs by sculptor Lehman-Borges, of Berlin are moulded in Ullersdorf ceramic w

ENTRANCE BAY—UPPINGHAM SCHOOL WAR MEMORIAL SHRINE.
ERNEST NEWTON, R.A., ARCHITECT
(*From "The Architectural Review."*)

Correspondence

fication & Registration

the Editors of THE ARCHITECTS' JOURNAL.

,—The letters appearing in your il on the above matter are of great t, and especially that emanating rank W. Simon. He has hit the ote.

n builders, undertakers, etc., can good work architecturally as 50 per f practising architects, why bother architecture? It is not worth g one's time on a profession such

I suggest that the poor way the ion is organized has brought it to ss?

builders and others might be if the architects endeavoured to a legal status is puerile.

down the curtain and go to

Yours faithfully,
JOHN SARVIS.

the Editors of THE ARCHITECTS' JOURNAL.

,—Provincial architects have been rly inarticulate on the subject as ther Unification should or should recede Registration. I have no ity to speak for any Allied Society, think that the following sums up itude of Liverpool architects :—

some time after the R.I.B.A. nce in Liverpool last June, pro- architects on the whole believed ith Unification achieved we should the immediate advantage of a profession; that the possibility of Parliamentary sanction to Regis- was strengthened and brought nearer; that the inevitable risk of tion must be faced, and that ly the proposals contained in the Report of the Joint Committee road and sound. Until details of neme have been worked out it is ible to estimate the number of architects who will become en- to admission to the Institute. closer inquiry into their character alifications must be made than in e of those who became Licentiates years ago. Many thought then ne prestige of the Institute with blic would be permanently lowered. isgivings proved groundless, and I.B.A. gained about 2,200 new rs, many of whom in due course Fellows. The risk of flooding the te to the disadvantage of those ave passed the examinations does m greater to-day than then.

June there has been a deluge of anda against Unification brilliantly ed by Messrs. Cross and Hubbard. luge may have gained a recruit or id it certainly created an attitude ot in minds which a year ago were ed that Unification must precede ation. The strongest argument doubtedly the opinion of Messrs. od & Co., the Parliamentary

ed by a certain measure of success, position made the extraordinary blunder of the Special Meeting. To endeavour to get a meeting in Conduit Street to prejudge and condemn in advance a policy, the details of which are not worked out, but to the principle of which all, or nearly all, of the Allied Societies are committed, was a downright insult to the Allied Societies. Every provincial member of the Institute is agreed that a great question of policy, which will intimately affect the whole of the profession, must be settled by a postal vote. The Council probably inspires more confidence now than in any period of its existence, and provincial architects believe that the Council is making an honest attempt to understand the wants and wishes of the Provinces. With the average London architect who can attend R.I.B.A. meetings it is different. He is not in touch with the Provinces: his vote is an expression of his individual sympathies, and the hundreds who can go to Conduit Street cannot represent the thousands whom time and expenses keep away.

I think that I am right in assuming that the Council intend to put the details of the Unification scheme to the test of a postal vote. It would clear the air if candidates for the new Council would intimate before the voting papers are circulated their views on the postal vote.

Yours faithfully,
HASTWELL GRAYSON.

Summoning R.I.B.A. General Meetings

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Several members interested in this question have been enquiring from me as to the method of summoning general meetings of the Royal Institute, and as to the length of notice required, and I understand that there has been some correspondence in the professional press on the point. It may interest your readers to have a statement as to this.

Broadly speaking, there are three ways in which a matter of this kind can be laid before the members of the Royal Institute for consideration :—

1. The Council can summon a special general meeting for any date they choose, specifying the business to be discussed. They can give the amplest possible notice of such a meeting, and they can call it either on their own initiative or at the request of a member or members.

2. The subject can be discussed by the Council putting it down as one of the matters for consideration at one of the four fixed business meetings of the session; or any member or members can send in notice for such a meeting. In this case very long notice can be given of the meeting so as to ensure adequate discussion.

3. Any twelve members can demand the summoning of a special general meeting by sending a requisition to the Council, and the Council are bound forthwith to call the meeting. It must be held within three weeks after the delivery of the requisition to the secretary. This provision in the by-laws obviously makes it impossible to give more than at the outside ten days' notice to members, as the requisition to the secretary has first to be laid before the next meeting of the Council, who have to fix the date and order the printing and sending out of the notice.

In other words, there are three methods of summoning these meetings, two of which allow of ample notice being given, while the other makes it impossible to give more than a very few days' notice. It is, of course, open to members to adopt any of these three methods which they prefer.

IAN MACALISTER,
Secretary, R.I.B.A.

Prix de Rome

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I should, perhaps, have added to my note of last week that the Council of the Architectural Association will, of course, enjoy the advantage of the advice of its teaching staff in any matter such as this which concerns its educational side.

Yours faithfully,
WILLIAM G. NEWTON.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Messrs. Atkinson and Richardson have in their replies adequately expressed the views held in this school. Until very radical alterations are made in the arrangements for this studentship it is unlikely that anyone from this school will compete.

F. RADFORD SMITH,
Department of Architecture, The University, Sheffield.

Higher Buildings

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Tait's admirable contribution to your Journal on the subject of higher buildings is a most important one, and I hope that it will in some measure correct the impression that a majority of architects are opposed to an increase in height because such a resolution was carried at a general meeting of the Institute.

It is a peculiarity of the Institute that meetings on contentious subjects do often produce majorities which are in no way representative. This anomaly may be due to the lack of ventilation in the meeting-room itself, no less than to the antagonism to new ideas which some of the leading men seem to think is expected from them. But whatever the occult reason may be, the result is unfortunate, for the official body should be in the van of progress.

Mr. Tait's opinions are shared by many of the younger men in practice, as well as by such distinguished seniors as Sir John Burnet, whose magnificent design for Adelaide House, illustrated in the same number, is far more convincing to me than any number of speeches by the

opponents of such architectural developments in this country.

The demand for higher buildings does not come exclusively from people who keep shops, whether large or small, but from the commercial interests of London as a whole. This fact is absolutely beyond dispute, and the Institute should meet the demand and gladly seize the opportunity so created for finer architecture—conceived on a bigger scale. So would the general scale of the streets be gradually improved, and a touch of magnificence begin to appear in our timid compositions.

With such ambitions coincident with modern requirements, the case for greater freedom of height is irresistible, and those who think the last word has been said upon this subject are under a delusion. It has yet to be proved that architects cannot meet all the needs of our time with imagination and skill.

H. AUSTEN HALL.

"The Commercial Ideal"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—That there is a large measure of truth in the arguments which Mr. Creswell presents with such vibrant sincerity it is impossible to deny, but the whole question hinges upon his interpretation of "The Commercial Ideal."

A large number of present-day business concerns are controlled by men who have a love of the beautiful for its own sake, and if their employment of art in business brings them reward it is surely a vindication of the fundamental rightness of this association, and should not be used as a peg upon which to hang the accusation that art has been prostituted for the sole sordid purpose of monetary gain.

Mr. Creswell likens the influence of commerce to the ravages of mange on a dog's back. Well, if one does not wish to destroy the dog, the best and kindest thing is to apply the appropriate remedies. This lessens the danger of the disease being communicated to others, and may in time even effect a cure.

The application of good architecture to commercial buildings helps to instil dignity, and an appreciation of truth and beauty, in all those who come within its sphere of influence.

Mr. Reginald Hallward in the discussion complained that a furnishing firm quoted Ruskin in one of their advertisements. It is fair to assume that this advertisement would be read by many who were without previous knowledge of this great writer's works, and it, perhaps, may have imbued them with a desire to further this acquaintance. If the advertisers' goods and service were equal to the high note struck by their announcement (and doubtless they were), then the ultimate result must be regarded as for the common good.

The function of an advertisement is to create an impression which, sooner or later, results in a desire on the part of the reader to purchase the goods or services offered. If the advertisements cultivate a desire for the beautiful, or point the road by which such existing desires are attainable, then they cannot rightly be regarded as an exploitation of the art which they employ.

Architecture is the missionary of the arts, and she must stand in the market-place and minister to the ignorant and, perhaps, depraved. So far as commerce provides the means whereby her message may be thus delivered, the whole world gains by the association.

Art selfishly pursued for its own sake alone produces abortions equally as repulsive as those which result from commercial operations having for their sole object the acquisition of wealth.

Yours faithfully,

L. E. WALKER.

Registration and the Rights of Associates

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—As officers of the R.I.B.A. Defence League we have been considering Clause 28 of the Charter of 1887, which states that although Associates can take part in a debate on any proposal to alter our constitution, "no Associate shall be entitled to vote in the making and adapting, altering, revising, suspending, or rescinding of any Bye-law."

Consequently, if the scheme of the Unification and Registration Committee were submitted to the full body of the Institute for approval, no Associate would have a right to vote, and Fellows alone would decide it. At the present time there are about 962 Fellows and 2,173 Associates, and to allow such a scheme, in fact, any scheme of drastic alteration to our constitution to be settled by the Fellows alone, would, we submit, be grossly unjust to the majority of the men in the Institute.

Consequently we propose at an early date to submit a requisition for a Special General Meeting, to express an opinion that the portion of the Bye-law quoted above should be deleted from our Charter at the earliest possible date, and in doing so we shall rely for support upon all Members of the League, and also upon all others who may differ from us as to the proper procedure towards Registration, but who will probably support a proposal which we submit should recommend itself to every member of the R.I.B.A.

ALFRED W. S. CROSS, V.P.R.I.B.A.
Chairman.
H. D. SEARLES-WOOD, V.P.R.I.B.A.,
Vice-Chairman.
GEORGE HUBBARD,
SYDNEY PERKS, Hon. Secs.

Book Reviews

The Study of Building Materials.

Mr. A. P. Laurie, who has made so many notable contributions to technical knowledge in its more scientific aspects, has laid the building trade under still further obligation by producing an excellent little work introductory to the study of the chief building materials. In his preface, Mr. Laurie says that his book is intended for the young architect and the young builder, and that "only the principal materials are dealt with, special stress being laid on the exact examination of the materials for their constructional strength under different conditions, and their composition as revealed by chemical analysis, and by the microscope." The materials with which he deals are: building stones, lime, natural and Portland cement, blast-furnace slag, plaster of Paris, magnesia, concrete, bricks, terra-cotta, pisé-de-terre, asbestos, steel, zinc, tin and brass, timber, paints, varnishes, wall-paper, Stockholm, coal-tar pitch, creosote oil, kno paste, Willesden fabrics, glue, size, asphalt—a fairly comprehensive list withstanding the limitation impli the title. A very instructive little which the architect will be glad t to his technical library.

"Building Materials: being an Introduction Study of the Principal Materials used in Buildi struction." By A. P. Laurie, M.A., D.Sc., F. F.C.S., Principal, Heriot-Watt College, Edinburgh fessor of Chemistry to the Royal Academy. P net. Edinburgh and London: Oliver and Boyd.

Reinforced Concrete Simply Explai

An intelligent understanding of reinforced concrete really is, of special functions it fulfils, and in manner it performs them, is not common. One has met builders, architects even, who have confess a certain haziness in such ma "Reinforced Concrete Simply Explai fulfilling its title, affords the mea acquiring a clear comprehension o properties and applications of the mat A complete chapter is given up to of the following subjects: Beams Slabs, Shearing Resistance of Co Beams, Design of Pillars, Materials the manual may be recommende satisfactorily meeting the needs o numerous class of "comparatively technical readers," as the author qua designates them.

"Reinforced Concrete Simply Explained." B Faber, D.Sc., etc. Illustrated. Price 5s. net. Technical Publications.) London: Henry Frow Hodder and Stoughton, 1 and 2 Bedford Street, W.C. 2.

Publications Receive

"Architect and Client in New Zeal By C. Reginald Ford, F.N.Z.I.A. H. Tombs, Ltd., Wellington.

"Laxton's Builders' Price Book, 105th Edition. Price 7s. 6d. net. Directories, Ltd., 186 Strand, W.C.2

"Catalogue of the Jones Collecti the Victoria and Albert Museum." Furniture. Price 2s. 6d. net, 2s. 10d free. Victoria and Albert Museum, Kensington, S.W.7.

"Sanitation and Sewage Dispos Farmsteads and Country Estates." William Paul Gerhard, C.E., Dr. Price 30 cents. Published by the a at 17 West 42d Street, New York C

"Experimental Cottages: A Repo the Work of the Department of Sci and Industrial Research at Ames Wiltshire." By W. R. Ja F.R.I.B.A. Price 5s. net. H.M. tionery Office, Imperial House, way, W.C.2.

Coming Events

Thursday, March 30.

Edinburgh Architectural Associat Annual General Meeting. Presi Address.

Architects' and Surveyors' Assi Professional Union.—Meeting at Hall. "The Overcrowding of the fession." By Major H. Barnes, F.R.I.B.A.

Monday, April 3.

R.I.B.A.—"London Clubs." By Ramsey, F.R.I.B.A.

Art Exhibitions

ern Art at the Grosvenor St. George's Galleries

well known that heterogeneous where the works of all manners and f artists are to be seen jammed ine frame to frame, are very diffi- handle. Usually they either cancel one another out of one's ble reception of them by a violent on of opposite methods of presen- r by a rump of artistic concep- o that whenever an attempt is deal with this baffling problem it be pointed out and encouraged, does make the visitor's round er and gives the artist a better to be appreciated, and therefore ibition of modern art got up by Magazine," and opened on , March 28, is here extolled on count. The rooms involved are ell lit, but a good deal of the rest- nd interest is due less to the light the very able hanging of pictures groups of three, with a mere foot back wall between the groups. well.

itle is rather misleading because foreigners are to be seen; one or gians, as many Frenchmen, one e, and one Italian give it its inter- character. Most of the pictures o the Realistic schools, what is wn as "modern art" being very vidence. In the large room is to a characteristic landscape by ckey, with much sunny atmo- almost next to it hangs a fine a girl reclining on a sandy beach, lture" and a shock of yellow eing its keynote. Mrs. Laura as a small but exciting canvas xing Fight" which does her great For artless simplicity give me en's "Summer Night," a lovely e of two small houses against a e sky; the heat of the day still out; the windows are wide open; s lit . . . a nocturnal peace . . . Perhaps the most arresting in this room is Mr. Orlando od's "Skin and Bone," a rather beautifully textured oil-painting ife, with its conglomeration of ir out-of-the-way objects. The d room holds some fine things, C. Ginner's "Timber Yard," an composition never once let the peculiar technique for which t is so deservedly known. Mr. ee's "Country Cottage," if not ious as most of his usual can- just as full of charm; the brush- vigorous without being brutal. m Orpen's "Kitty" is, of course, asing. We all know an Orpen see one—this particular one is s any.

of the most interesting stuff is in the last two rooms. Ethelbert ows once more a rustic scene of chaism with the whole country- g, in Browning's jolly phrase, in the morning's water-gold." n proffers another of his land- gain characterized by an almost e sense of simplification—jagged plain plains. Most people will be amused by Miss Gladys Hyne's "Boxers," two paunchy fellows setting about their fistic business with the deliberate calmness of quattrocentist heroes. Miss Eleanor Hughes has a lovely water-colour of "Boscastle" done in a crisp and architectural manner of no mean charm. Take Sato, the Japanese artist, is seen to credit with an English landscape seen through Asiatic eyes—that is, we see a great expanse of skies disturbed by two or three sinewy trees which cast thin and elegant shadows on a green ground of much delicacy. Lastly, among many other able pictures, we would like to praise a spirited water-colour of Miss May McCrossan—"River at Chelsea"—done in the "Rich" manner on rough brown paper. It is done with relish; it is simple, and leaves a distinctly pleasant mark on the onlooker. As may be gathered, this is what is known as a "safe" show, and remembering the district where it is held, one feels sure it will meet with popular success.

Totally different in character is the exhibition of Alfred Wolmark's works at the St. George's Gallery, George Street, Hanover Square. All one-man shows are, of course! Here one plunges straightaway into the modern capacity for strong colours. Mr. Wolmark is, above all, a decorator, and all his oil-paintings are strongly patterned.

There are twenty-nine oils and twelve drawings, the latter being somewhat faint echoes of John's more solvent music. One thing to observe is that, apparently, Mr. Wolmark is so keen on patterns—of shapes and colours—that he carries his love of them into the frames as well; twenty-seven out of his twenty-nine paintings being thus given an extra bit of paintable surface, and it must be admitted that they often help the paintings inside. Mr. Wolmark loves pungent colours, and as he seems to be very sure of his combinations there is no reason why he shouldn't go on; but his paintings, as he is doubtless aware, would not hang well in any old room. Perhaps the stuff shown is turned out a little hastily, and at times one feels a certain anæmia of conception; but it is not very apparent, the artist knowing enough of the world, of its ways and its wants, to satisfy it in a plausible fashion. "Power" (7), a study (but no more, Mr. Wolmark, believe me) of a power-station with a fine fellow of a chimney-stack in the corner and lots of smoke about, is a rather jolly affair. The "Portrait of the Artist's Wife" (9) is also excellent; its lemon-yellow background is bold and helpful. But the best of the lot is a really excellent series of studies of fishing boats and villages, such as St. Ives and Concarneau. Indeed, they are much smaller than the ambitious "Lower Broadway, New York" (19), but they have a reality denied to the larger picture, which strikes us as deficient in scale, fairly filled with uninteresting gaps, and turgid. On the other hand, "Two Men of the East" (29) is a pleasant oil, and probably the best colour-scheme here, with its fine harmonies of indigo blue, French blue, black, grey, and streaks of warm brown.

On reflection, this must surely be what is sometimes described as a "thought-provoking" exhibition, and students of decorative art might do worse than go and have a long peep at it. G. HOLT.

Women's International Art Club, The Goupil Gallery

The Women's International Art Club was founded in Paris in 1899 by two or three enterprising Englishwomen who were studying in the studio of Délécluse; it was called "The Paris Club." Since it moved its headquarters to England the club has flourished, but unfortunately, the prohibitive cost of the transport of foreign pictures has seriously hindered its post-war activities. For this reason the current exhibition—its twenty-first—is not so representative as could be wished; nevertheless time will remove what is merely a passing cloud. The future will be kind to an Order which deserves great kindness and great admiration.

On entering the gallery one faces immediately rather an amusing contrast in manners between "Boy and Rabbits" (16), by M. Vassilieff (which is an interesting piece of modernist work), and the landscape which hangs under it—a picture which one would imagine had come straight from the Royal Academy. But there is little that is exciting until one gets to the third gallery, where there is a fascinating "Nature Morte" (111), by Mela Muter, which consists of fish lying on a newspaper, the colour scheme being in blue, red, and white. The composition is satisfactory, and the handling expresses the subject in a startling way. You can smell the salt, dry tang of the dead fish; it pervades the Goupil Galleries for hours afterwards; and one cannot help thinking that in the "Portrait" (117), by the same artist, some tremendous mistake has been made. One of the deep sea monsters on the newspaper in "Nature Morte,' has crawled off and sat up by accident on a chair. Its eyes glaze as it sits. A portrait of a very different nature is "The Drowsy Child" (89), by E. Grace Wheatley, which is possibly the best thing in the exhibition, because it displays in the first place a study of forms which the artist has evidently enjoyed, and in the second place, a sensitiveness and a sincerity which is not common. The right eye of the child, slightly elongated by the pull of the pillow upon which her head lies, has evidently given the artist pleasure.

There are several other things worth noticing in this gallery. There is first "Maroussia and her toys" (114), by Lena Pillico; then "A Swiss Landscape," by Ruth Hollingsworth, which suggests that should the artist use a little more patience, a little more deliberation, she would do something really remarkable, though her snow scene "The Garden Gate" (129) is not pleasing at all. Again, "The Pink Gown" (122), by Esther Borough Johnson, shows dexterity, and is charming, despite its prettiness. The handling of the girl's left arm is vivacious; it is interesting to look at, and the fingers of the other hand appear skilful in a slick, graceful way until one discovers that with the fingers in the position they are, the middle joint of the first finger would come above, not below that of the middle finger.

Upstairs there are some clever water-colours, amongst which one would mention some vigorous work by Kats Cooper, "China Clay Boats" (229), by Grace Rogers, the colour values of which are rather original; "Betty" (246), by Mrs. Julia Creamer—a mercurial performance—and "Appledore" (187) and "February" (188), both by Mary Headlam. "February" is a fascinating piece of work.

H. DE C.

Hesketh Hubbard and S. Langdale

Eric Hesketh Hubbard, says the catalogue of the exhibition of his work at the Brook Street Art Gallery, has painted in all parts of Europe, but most of his subjects are chosen from the English countryside, which appeals to his feelings for simple subjects strongly and simply treated. "To say what there is to say in the simplest, most direct and unaffected way," is his gospel, and the manner in which he practises this is shown rather delightfully in his drawing of an old house in Copenhagen illustrated here. This is pen-and-ink work, and his manner in that medium is not so well known as his etching manner. It has the same characteristic of unassuming sincerity, however, which makes the exceptional charm of his etching and of his pencil drawing, putting those departments of his art in a place senior to his painting, which is inclined towards a vaguely romantic sentimentalism.

His strip of earth, his high expanse of sky, his rhythmic clouds, are melodious but mannered; but it is exactly that mannerism which is lacking in his etchings. Where, if anywhere, his sentimentalism or romanticism influences his etchings is in their subjects. Listen to such names as "New Forest Gypsies," "Peddlers," "The Roundabout," or "Re-painting the Caravan," and you cannot fail to catch a rumour of the vagrant's zest for colour and movement which seems to stir in Mr. Hubbard's blood. In "The Lights of Volendam" he reduces his lines until what remains becomes almost monotonous; in "Provisioning a Dutch Hay Barge" what he has to say is again expressed in the simplest terms. But "Inside the Blacksmith's Shop" is the most charming work of his in the exhibition, for here he has managed to combine simplicity with freedom and an informal appearance. It is just possible that the hatching under the table was unhappy.

Some of Mr. Hubbard's drawings are also charming, especially his drawings of ships, the intricacy of whose rigging and davits, etc., thrives under the simplification which he contrives. I wish, however, that he would sometimes sharpen his pencil.

There is also in the same gallery an exhibition of the work of Miss Stella Langdale, which, however, has no distant connection with architecture. Miss Langdale is the illustrator of "Christ in Hades," "Symphony Symbolique," "The Hound of Heaven," and other works.

H. DE C.

OLD HOUSE IN COPENHAGEN.
From a Pen Drawing by Hesketh Hubbard.

Early English Water-colour Drawings, and Others

No longer are Messrs. Agnew and Sons' galleries "greenery-yallery," nor are there now any "foot-in-the-grave young men," as in Gilbert and Sullivan's time. Neither are they quite the grandiose show of expensive foreign pictures of a little while ago. It is all changed, and no one will grudge the metamorphosis, for the pictures now shown are all English and of the best quality.

It is evident these 131 exhibits have been carefully chosen, with one eye on their intrinsic value and the other on their market worth; a good few must fetch rather tall prices, but anyhow one does not expect nowadays to pick up an excellent De Wint, Girtin, or Cotman for a mere obolus. I mention these three great and honest masters advisedly, for it so happens that, with Turner, they are the best; and they are the best because, beside much splendid and unmatched skill, they show an almost classical sense of composition, taking it in its broadest meaning. J. R. Cozens, too, is there, and dear Copley Fielding, and there is one tiny and delightful Bonnington. These artists are enough to turn any retrospective exhibition into a success; but, in order to make sure, there are also fine things by David Cox and Wimperis, and Birket Foster, of whom it was said that none could so faithfully convey the delicate exigencies of English landscapes in such an artless fashion.

There are, moreover, A. G. Vickers, Holman Hunt (with an amazing underwood in bright colours), and that robust fellow, R. Toune, of simple and bold washes. The fifteen Turner water-colours are very fine and fearless; they fall within the two best-known categories: English and Swiss Drawings. None of the Rhine or Italian series, so well represented at Farnley Hall or a Tate Gallery, are hung here, but wh shown certainly impinges upon period of his greatest academical popular successes—that of 1813 to If none come from the 1809–1813 p when Turner was developing that and solemn conception of the poet rural life which found its most con mate expression in the "Frosty M ing" or "Windsor," a good many, as "Geneva and the Mont Blanc the Lake" (10) and "Yarmouth" are dazzling enough to make one un stand why, during these hectic yea sheer work and unabated enthusiasm founded, without really knowing it, truly national school of homely rea the Norwich school, and was the m of David Cox, De Wint, and, at tim we know it now—of Cotman himself

Cotman . . . Turner apart, there is n in our fine English school of imagin so rare, of achievement so various. T is enough in this exhibition to give a idea of his talent. If we miss "The V Afloat" and the "Baggage Waggon" that lovely "Windmill" (now, I bel in Mr. Palser's collection), we get, or other hand, the bold "Mont St. Mic (23), and, above all, the "Ruined To (35), with the delight of its dran shadows (we are, of course, still near, in the middle of the romantic moven which explains a deal of otherwise accountable fervour and sciolism), the strength of its simple composit And De Wint has also glorious w colours. They are large, bold, somet meticulous, always honest and arres "The Bridge" (29) and "The Tha Rainbow" (19) are very beautiful th

The show is quite an event, in poi fact, and I would commend it strong the attention of modern architects cause there is evidence of a keen pe tion of architectural subjects throug These artists of nearly a century ag love all fine picturesque buildings, all landscape cogitating about a s tural nucleus, as it were, Cotman h a conspicuous example. All throug life he kept up two strains in his art, by side, taking refuge often from se labour at patient architectural wor composition of freest fancy and somet extravagant—withal attractive—col colour-dreams as if inspired by Tu but Cotman's own, if you look into t They are the offsprings of his way self-sufficiency, luxuriating in a rich as of "globed peonies" and "rainbo Indeed, they remind one of som Shelley's lyrics, and Turner and De W and certainly Bonnington—poor, yo desperate Bonnington—run him p close in this mad and sane, divine earthly pursuit. This exhibition yield to all some of their secrets and delectable beauty of their hallowed w

The annual exhibition of water-co shown at Messrs. Arthur Tooth and S galleries is on a different level altoge True, we are here once more dealing Turner, David Cox, and De Wint, these are some of their less-insp efforts. Both Birket Foster and S. P are at their most painstaking, A. Wake-Cook is sleepy stuff. The by Sir J. D. Linton, MacWhirter, J and H. Moon, R.A., are just plain insipid and probably able water-co drawings which have contrived to themselves pretty well.

G. HOI

el-Aini Competition: Assessor's Report

ıvitation of the Egyptian Govern- take part in the final competition Qasr-el-Aini Hospital, Cairo, tion has been accepted by the g: Mr. E. Vincent Harris; M. A. M. A. Lisch; Messrs. W. A. Pite, d Fairweather; Messrs. H. V. nd Winton Newman; and Messrs. Adams and Holden. Mr. J. W. , PP.R.I.B.A., is the assessor.

ving is Mr. John W. Simpson's on the Preliminary Competition Qasr-el-Aini Hospital:—

Shepheard's Hotel, Cairo,
12th December, 1921.

ellency Mohamed Pasha Shafik, Minister of Public Works.

ENCY,

-el-Aini Hospital and School.

have the honour to report to ; in accordance with the decision Government, the necessary steps n duly taken to invite architects t competitive designs for the new and school; the documents d by H.H. Government being those desiring to compete.

e preliminary stage of the com- which is terminated by the report, sixty-six sets of drawings were received. These were unpacked, numbered for subsequent identification, and hung for my inspection in one of the galleries of the Egyptian Museum. The sealed envelopes containing the authors' names were numbered to correspond with the respective designs, and placed in charge of the Director of Public Buildings. The key of the gallery was handed to me and has remained in my possession; the designs submitted being treated as confidential, and the procedure followed being that laid down by the "Conditions of Competition."

It is now my duty to report to your Excellency that I have completed a very careful comparison and analysis of the sixty-six designs submitted in the preliminary stage of the competition, and that I have selected the following six designs, namely: Nos. 19, 23, 31, 35, 41, and 49, the authors of which are entitled (in accordance with Clause 1 of the "Conditions of Competition") to be invited to take part in the second stage, or final competition.

I have the satisfaction to inform your Excellency that a large proportion of the designs received were of high merit, and that close consideration was needed before making my award.

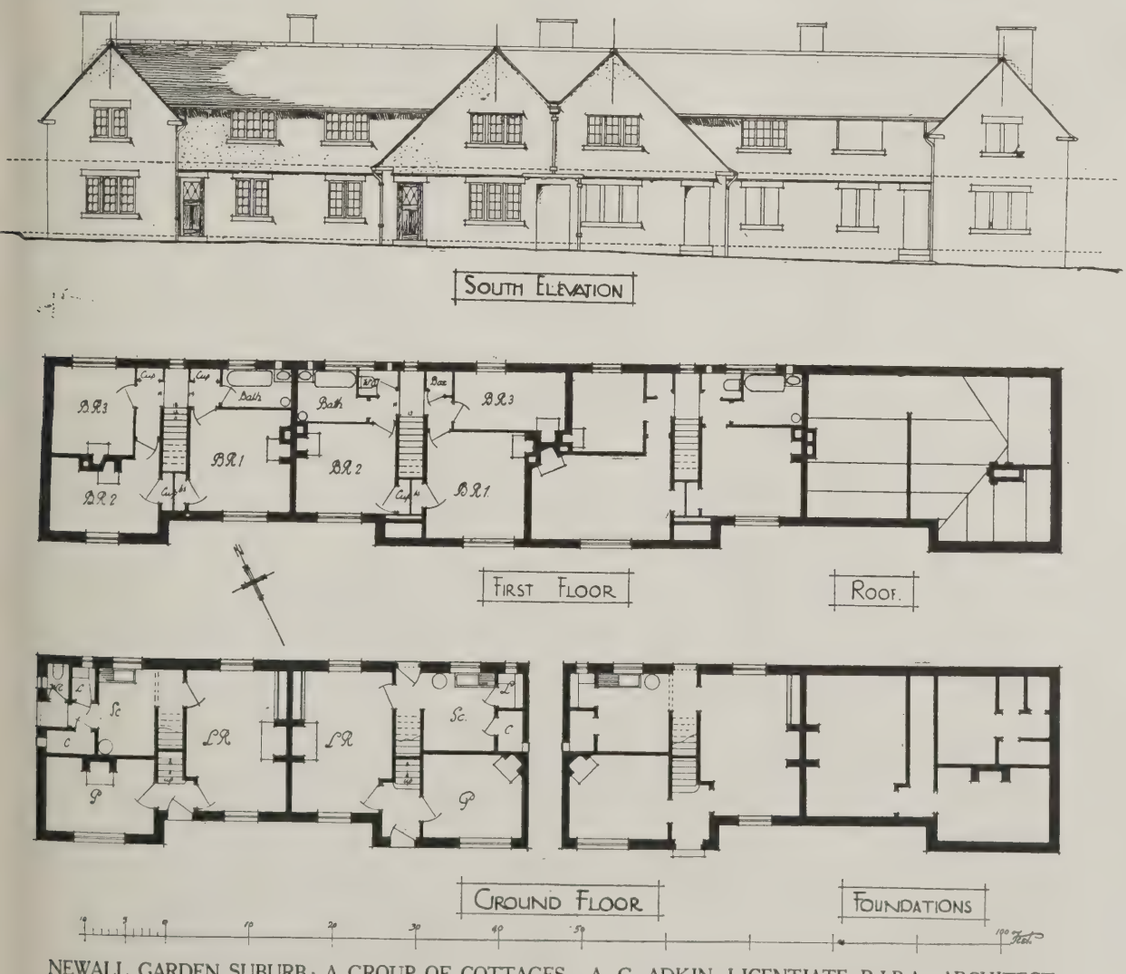
I have the honour to be
Your Excellency's obedient
humble servant,
(Signed) JOHN W. SIMPSON,
Past-President, The Royal Institute
of British Architects.

Newall Garden Suburb

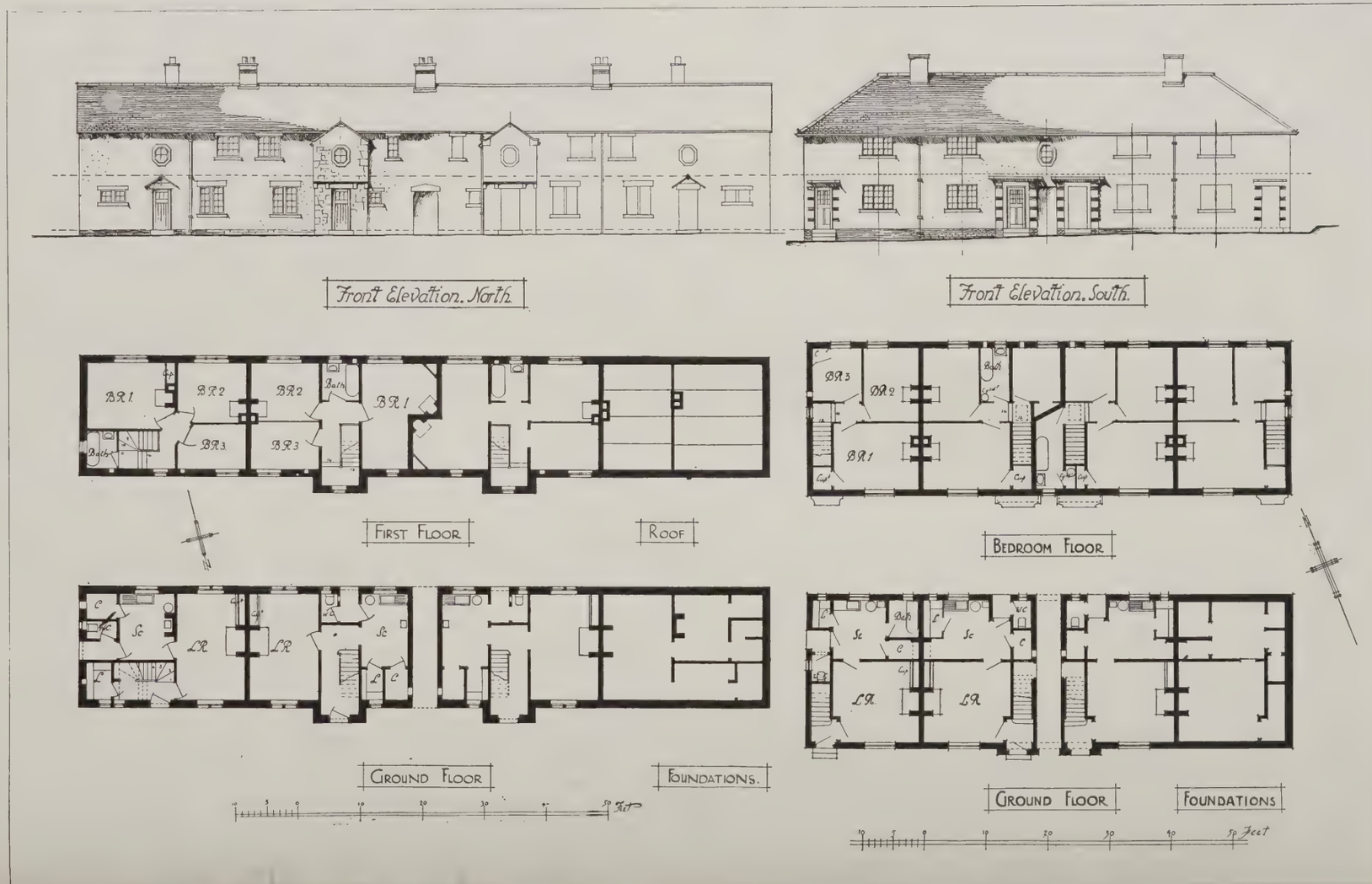
This new garden suburb is being erected at Newall for the Otley Urban District Council from the designs of Mr. A. G. Adkin, Licentiate R.I.B.A. The site is an exceptionally fine one, sloping gently from north to south, with open views on all sides of the beautiful valley of the Wharfe. The scheme comprises eighty-eight non-parlour and 118 parlour type houses, semi-detached and in blocks of four, with two blocks of four flats in addition. No shops are provided owing to the fact that the Otley Market Square is only 700 yards distant from the garden suburb. Brick and rough-cast, lime or colour-washed, is being used for the construction of the houses.

A strong point has been made of planning the whole of the houses so as to obtain a sunny aspect for the living rooms and principal bedrooms. This has necessitated fifteen separate types of plan, all of which have specially designed elevations. In the lay-out back roads are practically eliminated, and no set building line is adhered to. The roads and sewers were laid out in 1920, and the building of the houses was commenced in November, 1920. In December, 1921, sixty-six houses were occupied, forty had the roof on, and the remainder were in various stages of completion.

The contractors for the streets and sewers were Messrs. Ward and Tetley, of Bradford, and Messrs. Sir Robt. McAlpine and Sons are erecting the houses. Mr. S. Maston is clerk of works.



NEWALL GARDEN SUBURB: A GROUP OF COTTAGES. A. G. ADKIN, LICENTIATE R.I.B.A., ARCHITECT



NEWALL GARDEN SUBURB: TYPES OF COTTAGES. A. G. ADKIN, LICENTIATE R.I.B.A., ARCHITECT

The Week's News

ver Development Scheme.

Harbour Board propose to .500,000 on a development

illage Hall for Stewkley.

ide a village hall at Stewkley ıe Earl of Orkney has offered Mr. Robert Courtneidge £200.

fare Centre for Shoreditch.

l welfare centre is to be formu- ıoreditch. The Carnegie Trust itch have made a grant of wards the scheme.

£10,000 Gift to Hull.

ht Hon. T. R. Ferens has in- s intention of purchasing a site echnical college and presenting ity. The cost is approximately

w Hospital at Woolwich.

tion to the national centres for ng of women as maternity been opened by the Queen at The architects were Messrs. l Hall.

Division War Memorials.

memorials of the 20th Light which are being erected upon ılly granted by the Belgian and Governments at Langemarck ient) and Guillemont (Somme) veiled at Whitsuntide.

The Blue Nile Dam.

ı the Sennar Dam is being held Egyptian Government owing funds. The dam is being con- ɔn the Blue Nile, about 150 ı Khartum, to raise the water a flood has passed to feed a miles long.

Bay Pier Pavilion Destroyed.

Bay Pier Pavilion has been by fire, the damage being at between £30,000 and It was the largest building of North Wales, having provided ation for about 2,500 persons.

Blyth Housing Scheme.

ısing Committee have accepted of the Building Guild, Ltd., ndred additional houses for the Road housing scheme. The to be erected in blocks of s, and eights, and are of the ır type, with three bedrooms.

wn Planning Institute.

neral meeting of the Town Institute is to be held at 92 treet, Westminster, S.W.1, on ɔril 7, at 6 p.m., when Mr. F. G. , F.S.I., will read a paper 'The Effect of Zoning on Land

ilbury Landing Stage.

Committee of the House of has given its sanction to a pro- nstruct a large floating landing ilbury. The stage will be con- h the shore by two bridges and nilar to the Liverpool landing

Houses at £420 Each.

By letting tenders for eight new houses at Steeton at figures which work out at £420 per house, the Keighley Rural Council claim to have set up a record for the West Riding in regard to cheap building under the National Housing scheme.

Board of Architectural Education.

The Problems in design submitted by candidates for the final examination and the special war examination will be on exhibition in the galleries of the R.I.B.A. from Friday, March 31, to Friday, April 7, between the hours of 10 a.m. and 5 p.m., Saturdays 10 a.m. to 1 p.m.

Ramsgate Improvements.

At Ramsgate extensive improvements are to be carried out to the east and west cliffs. An arterial road is already under construction. On the east promenade extension ornamental rockwork will be formed, and it is proposed to develop the west cliff as far as Pegwell Bay.

Salonika War Memorial.

The scheme of the Imperial War Graves Commission for the erection of the Salonika Battle Exploits Memorial has now taken definite shape, and it is hoped to begin the work of construction at an early date. The memorial, which is to be erected at Colonial Hill, overlooking Lake Doiran, has been designed by Sir Robert Lorimer, A.R.A., R.S.A., architect to the Commission for Italy, Macedonia, and Egypt.

The Arch of Old London Bridge.

Mr. A. C. Stanley Stone, chairman of the Bridge House Estates Committee, said that, while they had given sympathetic consideration to the subject of preserving the very interesting arch of the first London Bridge laid bare during recent excavations, they were not able to assist in its preservation in any way.

Pitt House for Sale.

Pitt House, Hampstead, the refuge of Lord Chatham, is to be placed on the market. There are still, it is said, labels in Lord Chatham's handwriting on the drawers in one of the rooms. The grounds abut on Hampstead Heath, and are part of Wildwood Corner, mentioned in Domesday.

Mr. Arthur Stockwell.

The death has occurred of Mr. Arthur Stockwell, the well-known Newcastle architect and surveyor. Mr. Stockwell had carried on an extensive practice in the city for many years, and was a prominent man in the profession. He designed many important buildings, but his best known work was the Shipley Art Gallery at Gateshead.

Pantiles, Tunbridge Wells.

The Pantiles, Tunbridge Wells, together with the Bishops Down and Chalybeate Springs, are to be sold privately. Queen Henrietta-Maria visited the place for her health in 1630, and lodged with her retinue in tents pitched on Bishops Down Common, but the visit of Charles II and his Queen in 1664 brought the already popular watering-place into fashion. Queen Anne, before her accession, frequently stayed there.

Sandhurst War Memorial.

The memorial chapel to officers trained at Sandhurst College, Berkshire, who fell in the war, will contain panels bearing nearly 4,000 names. The east end of the chapel is now complete, and forms an interior beautiful in its simplicity of white marble and oak panelling, with a black marble floor. The architect is Mr. Arthur C. Martin, 9 New Square, Lincoln's Inn, W.C.

Southend's Pier.

Southend Corporation have decided to improve their pier, and a scheme has been considered by the Pier Committee. The cost is estimated at £210,000, and the scheme includes the enlargement of the pier entrance and toll-house, and the widening of the pier as far as the existing pavilion, the erection of a theatre with seating accommodation for 2,000, and the provision of a palm house, Japanese tea gardens, and refreshment pavilion and shops is suggested. An arcade is to be constructed under the pier.

Alterations at York House.

Before the Prince of Wales's return to London certain re-arrangements are to be carried out at York House, St. James's Palace, in order to make the place more convenient for his Royal Highness. These will include a re-arrangement of the furniture and decorations in order to provide room for a portion of the many handsome gifts that have been showered upon his Royal Highness in India.

National Federation of House Builders.

The annual meetings of the National Federation of House Builders are to be held at the Exchange Hall, Nottingham, on Thursday and Friday next. On Thursday there will be a civic reception by the Mayor of Nottingham at 2.30 p.m., followed by the presidential address and annual business meeting. A dinner will be held in the evening. On Friday the meeting will discuss important resolutions on housing policy.

Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to February 28, 1922: permanent houses completed, 5,613; temporary houses completed, 634; reconstructed houses completed, 75; houses built under the private subsidy schemes, 1,393. In addition there are 13,306 houses under construction, of which 1,927 are being built by private persons with the aid of the Government subsidy. The total amount paid by the Scottish Board of Health in respect of the 1,393 houses completed under the private subsidy schemes is £336,336 13s. 4d.

Architects' Olympian Night.

A fancy dress ball and carnival, organized by the Architectural Association, will be held on Friday, April 21, 1922, in the Conference Hall, Olympia, which will be specially decorated. A carnival procession, "Brighter Building," will pass through Olympia at 9 p.m., and dancing will take place from 9.30 p.m. to 5 a.m. All the proceeds will go to the Architectural Association Endowment Fund. Tickets, including refreshments: single, £1 1s.; double (lady and gentleman), £1 15s., to be obtained from Mr. F. R. Yerbury, Secretary, The Architectural Association, 34, 35, and 36 Bedford Square, W.C.1.

Port Development in Chile.

A law has been approved by the National Congress authorizing the President of the Republic of Chile to put into effect a scheme of port works. Included in the scheme are the completion of harbour works at Valparaiso, complementary works at Antofagasta, the execution of repair works at the ports of Constitucion, Iquique, Talcahuano, Lebu, Puerto Saavedra and Valdivia, the construction of a mole and wharf at Puerto Montt, the construction of a wharf at Tome and Pichilemu, the construction of the railway from Los Sauces to Curico, etc. Full particulars may be obtained from the Department of Overseas Trade, 35 Old Queen Street, S.W.1.

Sir Aston Webb and the Norfolk and Norwich Association of Architects.

A new Allied Society of the Royal Institute, which was formed in 1921 for the advancement of the art of architecture and the protection of the profession in the county of Norfolk, was admitted by the Council of the Royal Institute in November 1921. Mr. Edward Boardman, F.R.I.B.A., of Norwich, was elected the first President of the Association, and the new body had its inaugural function in the form of a banquet in Norwich on Friday, March 24. The Council of the Association were exceedingly fortunate in obtaining the presence of the President of the Royal Academy. The sympathetic interest which Sir Aston Webb has taken in the foundation of this new professional body is very keenly appreciated by the architects of East Anglia.

Church Extensions and Repairs.

The Incorporated Church Building Society have made the following grants towards enlarging, reseating, or repairing churches: Beeston-next-Mileham, St. Mary, Norfolk, £50; Blackburn, The Saviour, £175; Kilburn, St. Augustine, £75; Kingsclere Woodlands, St. Paul, Hants, £25; Platt, St. Mary, Kent, £30; and Pontypool, St. James, £100. Grants have also been made from the Mission Buildings Fund towards purchasing the Mission Church of St. Thomas, Dukinfield, Cheshire, £20; and towards building St. Barnabas Mission Church, Tuffley, Gloucester, £75. The following grants were also paid for works completed: St. Anne, £25; Dalston, St. Bartholomew, £45; Brompton, Holy Trinity, Kent, £175; and Damerham, St. George, Salisbury, £15. The sum of £689 was also paid towards repairs to thirty-three other churches.

Society of Architects' Design Competition.

Nineteen, or about fifty per cent., of the provisional entrants submitted designs in the preliminary test for the first half-yearly designs competition which closed on Monday, March 20, the subject being "The Entrance Gates for the Grounds of a Country House." The drawings were numbered as received, and the jury of assessors, Messrs. Percy B. Tubbs, L. Sylvester Sullivan, H. M. Robertson, and Thomas Wallis, after long and careful examination of the designs, selected the authors of the drawings marked 3, 4, 5, 6, 9, 10, 11, 13, 16, and 18 to compete in Part II of the competition. These were afterwards identified as follows: Licentiates: Harold Scott Dalby, of Chester (13); Oswald Howell Green, of Truro (16); Roland Hulbert Shrewsbury, of Eccles (3); Students: Harold Anderson, of Canterbury (11); Stuart Bedford, of Hove (5); Alan Joseph Biddulph, of Birmingham (6); Colin Arthur Browne, of Birkenhead (10); Leonard Keith Dyer, of Portsmouth (4); Edmund Kenneth Rainford, of Hoylake (9); Cecil George Vickerman, of Huddersfield (18). The final result of the competition, which is of the value of £40, will be published in the JOURNAL in due course.

Professional Items

Mr. Walter C. Bickerton, A.R.I.B.A., has commenced practice at No. 4 Midland Bank Chambers, Castleford, Yorks.

Mr. Mowbray A. Green, F.R.I.B.A., has moved his offices to 27 Queen Square, Bath.

The style and title of the firm of Messrs. Willink and Thicknesse, architects, has been altered to Willink and Dod. The address of the firm is Cunard Building, Liverpool.

Messrs. J. Hatchard-Smith and Son, F.R.I.B.A., have moved their offices to 11 Haymarket, S.W. The lease of their offices at 6 Duke Street, Adelphi, W., expired on March 25.

Mr. Arthur J. Murgatroyd, of 23 Strutt Street, Manchester, has taken Mr. James Hembrow, A.R.I.B.A., into partnership. The firm will be carried on under the old style of Mills and Murgatroyd, architects and surveyors.

Trade and Craft

Hard Courts at Queen's Club.

We hear that Queen's Club, Kensington, have decided that all their hard courts are to be En-Tout-Cas. Five new courts are ordered, and the others are to be converted into En-Tout-Cas courts.

Kent Portland Cement.

Shareholders of the Kent Portland Cement Co. are asked to sanction the voluntary liquidation of the company and the sale of the undertaking to the Associated Portland Cement Manufacturers.

The Price of Bricks.

The Leeds Fireclay Co., Ltd., of 167 Strand, London, W.C.2, inform us of a further reduction of £2 per 1,000 on all best and seconds white and coloured glazed bricks at "per 1,000," making Best W.G. Stretchers £24, and so on. Bricks charged at "per *each*" *no* alteration.

R.I.B.A.

Following are some notes fro minutes of the Council Meeting R.I.B.A. held on March 20:—

R.I.B.A. Medal for Schools of tecture.—On the recommendation Board of Architectural Education, decided that a medal be given Royal Institute for the best set of ings submitted, at the Annual Exh by post-graduate students exempte the Final Examination.

Street Architecture Award.—The cil approved for publication the tions for the annual award of a me the best street frontage completed the previous twelve months wi radius of four miles from Charing The conditions will be issued fort The Jury for the Award consists o Earl of Crawford and Balcarres (Hc Chairman; Sir Aston Webb (F.), P Past President, R.I.B.A.; Mr. Waterhouse, P.R.I.B.A.; Sir Re Blomfield, R.A., Past President, R.I Mr. E. Guy Dawber, Vice-Pre R.I.B.A.

Durham War Memorial.—The C decided to support the resolution by the Council of the Northern Ar tural Association protesting again proposed erection of the Durhan Memorial in the centre of the Green at Durham.

Sand-Lime Bricks.—Mr. H. D. S Wood, Vice-President, was appoin represent the Royal Institute o Sectional Committee formed b British Engineering Standards A tion to prepare a British Standard fication for sand-lime bricks.

Professional Classes Aid Cou Mr. George Hubbard (F.) was reapp to represent the Royal Institute Professional Classes Aid Council.

The Royal Gold Medal.—The Rt Sir Frederick Ponsonby, the Kee the Privy Purse, informed the C that His Majesty the King had app of the award of the Royal Gold Me Architecture to Mr. Thomas Hasti New York.

List of Competitions C

Date of Delivery.	Competition.
April 3	Label in colour for jam pots. Messrs & Blackwell. Premium 20 guineas. Design and Industries Association, Square, W.C.1.
May 1	Business building, facing on an London street, in which "colour permanent nature) would be the d feature. Premiums £100, £50 a Apply, Secretary R.I.B.A., 9 Street, W 1.
June 12–17	Owen Jones and Mulready Prizes for for Architectural decoration, woodw cabinet work, textiles. Apply Secret Royal Society of Arts, John Street,
June 30	Museum and Institute as war memo City of Auckland, New Zealand. £170,000. Premiums amount to Apply Secretary, R.I.B.A.
	Through the courtesy of a New architect, now in London, three photo showing different aspects of the sit Auckland War Memorial have been the R.I.B.A. They are exhibited R.I.B.A. Library for the benefit petitors.
August 31	Henry Saxon Snell Prize will this ye sist of 50 guineas and the meda Institute for an essay on "Improv in the Sanitary Appliances and Fitt new Housing Schemes, having re Efficiency and Economy." Appl Sanitary Institute, 90 Buckingham Road, S.W.1.

Enquiries Answered

Sweep's Brush in Chimney.

.C. writes : "Can you tell us the best)d of clearing a chimney that has locked up by a sweep's brush ? The ıey is 90 ft. high, and the brush is vhere about half-way up. No hts at all can be obtained up the ıey. The sweep states that he is e to remove the brush, and attri- the blockage to the brush collecting ıg on its way down the chimney."

ıggest that a set of drain rods with head should first be tried; these succeed in dislodging loose parging, s is the cause of the obstruction. e event of failure access must be l to the head of the chimney and a t securely fastened to a wire rope ed down the flue until it encounters ostruction, when it should be raised owered smartly in such a manner as ıl hammer-like blows. Should these s fail the flue must be traced and to at the point of the stoppage, which e located lineally by measurement ls and wire rope.

E.

ıility for Repair of House Drainage.

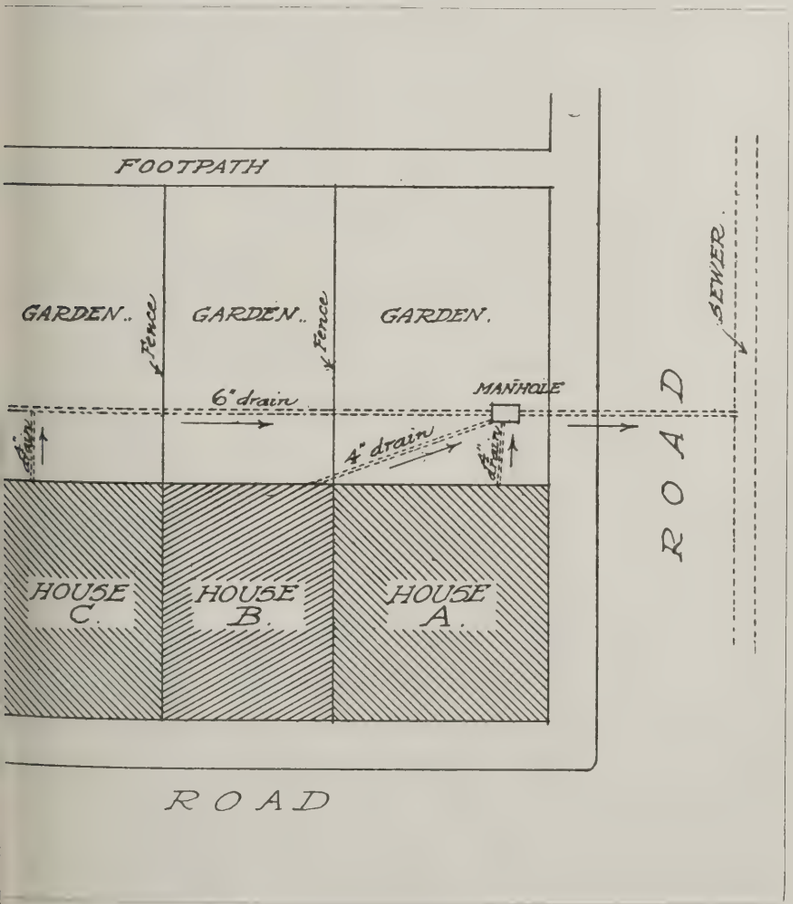
. J. writes : "A manhole situated in len of a dwelling-house A (see sketch luced) receives the drainage of two ıing houses B and C. The drainage n of A has been condemned, and including the manhole, has to be ed. Should the owners of the houses A, B, and C share the cost of renewing the manhole, and would the owners of B and C be liable for replacing damage to pipes in A's garden which connect B and C drainage to the manhole ?"

—Apparently the drain is a joint one, and the "manhole" referred to is a chamber formed for the inspection of the drain at the point where the drainage of the lowest house (A) enters it—the public sewer being a little farther below. I am of opinion that so much of the drainage as exclusively belongs to A must be repaired by him only, but if the inspection chamber and short bit of drain between it and the main sewer are defective, then all three owners (A, B, and C) should contribute equally—as they use it equally.

Should it happen, however, that the relaying of A's own drainage necessitates the rebuilding of the inspection chamber (which otherwise is sound) then A alone must bear the expense. F. S. I.

New Lawn Tennis Stand at Wimbledon

Captain C. Stanley Peach, F.R.I.B.A., has conducted an interesting test upon the new centre court stand which is being built at Wimbledon from his designs. This stand is being constructed in reinforced concrete on the Kahn system, and as it is to be used when the championships are played in June all concerned are watching the various stages of progress with great attention. It was decided to place upon the stand a human load, as it was desired that the test should closely approximate, but exaggerate, the use to which the stand would eventually be put. Workmen in the employ of the contractors, Messrs. Stuart's Granolithic Co., were therefore marshalled by Captain Peach on to the lowest step of the centre bay on the west side of the stand, the men crowding together in order to bring the greatest possible load on to that portion of the stand. As the seats have not yet been fixed, a greater number of men were actually assembled on this bay than will ever be possible when the stand is in use. At the word "About turn—at the double," the men swung round and swarmed up the steps to the top of the stand. They remained there until the word was given, when they clattered down again and dispersed to the exits. The deflection registered when the stand was under load was hardly perceptible, and the result of the test is considered highly satisfactory. The stand, when completed, will be called upon to seat some 10,000 spectators.



HOUSE DRAINAGE QUESTION.

The British Portland Cement Manufacturers, Ltd.

According to the last annual report of the directors of the British Portland Cement Manufacturers, Ltd., the demand for Portland cement both for home and export showed a steady decline during the past year. In the home market this was caused mainly by the three months' coal strike, the general depression of trade, and the Government's change of policy with regard to the National housing schemes. The export trade was adversely affected by the depreciation of foreign exchanges, and by lower freights from the Continent than those obtainable from this country. The additions to capital include the cost of doubling the output of the Magheramorne Works, near Belfast, modernizing the Norman Works at Cambridge, and substantial improvements and extensions to other works. The profit for the year of £479,762 2s. 10d. compares with £558,839 16s. in the previous year.

Provision has been made in respect of the estimated liability for income tax, excess profits duty, and corporation profits tax. The sum of £150,000 has been placed to general depreciation reserve, and £5,000 to barge depreciation account, the same amounts as last year; in addition, provision has been made for other reserves, and for the debenture stock sinking fund. The issue has been made of a further £509,533 of 5 per cent. debenture stock. There is a balance of £53,029 5s. 7d. to the debit of the debenture stock discount account, after crediting this account with the redemption account reserve. The directors recommend the payment of a final dividend of 5 per cent., less income tax, on the ordinary shares, making an ordinary dividend of 10 per cent. for the year. Mr. H. Le Marchant retires from the Board at the meeting which takes place on Friday next, and, being eligible, offers himself for re-election. The auditors, Messrs. Crewdson, Youatt, and Howard, retire and offer themselves for re-appointment.

Increased Recreational Facilities

Local authorities are taking active steps to increase facilities for tennis and other sports, the provision of hard courts, additional to or in place of some of the grass courts, being one of the recent developments. There are, however, other means by which the hours of play may be lengthened, one of which is the skilful application of artificial light to indoor and outdoor courts, to bowling greens, to rifle ranges, and so forth. Important developments in this direction are described in the current issue of "A Thousand and One Uses for Gas" (No. 97), and a number of illustrations of artificially lighted tennis and badminton courts, bowling greens, rifle ranges, etc., are included. The equipment of athletic clubs with efficient washing, bathing, catering, heating, and lighting arrangements is also a subject which receives attention. Secretaries and members of committees of athletic or territorial associations would do well to send for this interesting and really useful publication, price 6d., post free, from the Secretary, The British Commercial Gas Association, 30 Grosvenor Gardens, S.W.1.

Industrial Enterprise

Often one hears of a firm discarding old ideas for those created by the more progressive mind, but it is rarely that an old-established concern, with a big name, embarks upon such an ambitious plan of new management as is now inaugurated at Messrs. Williams and Williams, Ltd., "Reliance" Works, Chester. Since its earliest days this firm has consistently followed a progressive programme, and has strictly adhered to a policy, laid down in the days of its foundation, whereby the soundness of every new plan has to be proved before it is adopted. We believe that it is claimed by Messrs. Williams and Williams, Ltd., that their factory and administration are now organized to a pitch which enables them to provide an even finer service to architects and builders than they have ever been able to offer before. And bearing in mind some of the past achievements of this house, it would seem that it means to become still more firmly planted on the top rungs of the ladder.

New Inventions

Latest Patent Applications.

7054.—Alwyn, L. — Manufacture of moulds for concrete, etc., columns. March 10.

7049.—Anderson, W.—Means of preserving stone, brick, etc., work. March 10.

6753.—Wilkey, C. A. — Knockdown trestle or scaffold. March 7.

Specifications Published.

175696.—Kelly, C., and Belvoir, T.—Beevers.—Concrete blocks for building purposes.

175808.—Brown, J.—Metal glazing bars for windows, roof-lights, and the like.

Abstract Published.

174268.—Roof and wall shingles.—Griswold, A. A., 140 Roosevelt Street, Providence, Rhode Island, and Chevalier, J. F., 1463 Beacon Street, Brookline, Massachusetts, both in U.S.A.—Roof and wall shingles of diamond shape are made of flexible material such as paper or felt, and are provided on the lower corner with a fastening permanently secured to the shingle before being laid and without penetrating therethrough. The fastening comprises side a a neck, a shank with pi which are embedded in thickness of the shingle, side pieces which are bent the edge as clamps. A sh so provided is laid over junction of two slates in course below, and is then m upwards so that the arm under the two lower slates the neck lies between t Nails are fixed in the sides

The above particulars are specially prepar Messrs. Rayner & Co., Registered Patent Age 5 Chancery Lane, London, from whom readers Journal may obtain all information free relati patents, trade-marks, and designs. Messrs. Rayner will obtain printed copies of the published specific and forward on post free for the official price of 1/

Town Planning Ac Appeals

The Ministry of Health have issu circular, No. 286, to local authoritie draw attention to the case of R Minister of Health (*ex parte* Rush). this case on January 18 the High C decided that the provisions as to app contained in subsection (6) of Sectio of the Housing, Town Planning, etc., 1909, are applicable to notices requ the execution of works and demand the payment of expenses incurred u Section 28 of the Act of 1919. Minister is considering the questio amending the Housing Acts (Form Orders and Notices) Order, 1919, bu the meantime he suggests that all no served by a local authority requiring execution of works under Section 2 the Act of 1919 should, in addition to information given on the form prescr by that Order, contain the notes g in the circular. Copies of the circ may be obtained from H.M. Statio Office, price 1d. net.

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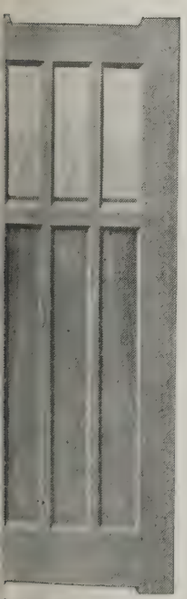

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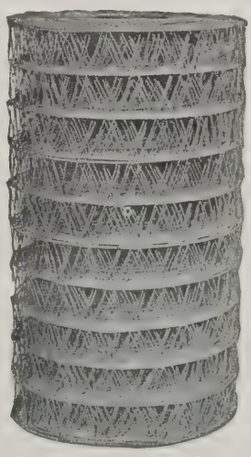

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Electrical Notes

Artificial Light and Aerial Navigation

Lt.-Col. L. F. Blandy, in reading a paper before the Illuminating Engineering Society, described the arrangements for lighting aircraft of the R. 36 type, which was lit internally by 12-volt lamps. Energy was derived from five generators belt-driven from the main propellor shaft, charging a 40 amp-hr. battery. For the passenger accommodation 48 lamps of 8 c.p. each were used, and other lights were assigned to the control car, power car, wireless cabin, etc.

External lights included a white forward light (8 km. range), a green light on the right (5 km. range), and a red lamp of similar range on the left. Special design was necessary to prevent the green light being seen from the left, or the red light from the right. A white light must also be attached to the rear (also 5 km. range). Some difficulty had been experienced in obtaining constancy of coloration for the glasses used for the red and green lights.

In view of the high speed at which modern aircraft travelled, navigation lights were of obvious importance, and the present range might have to be increased. Thus, if two aircraft, each travelling at 100 m.p.h., meet in mid air, the period of time from sighting the lights to collision was only ninety seconds for the headlights, and fifty seconds for the side-lights.

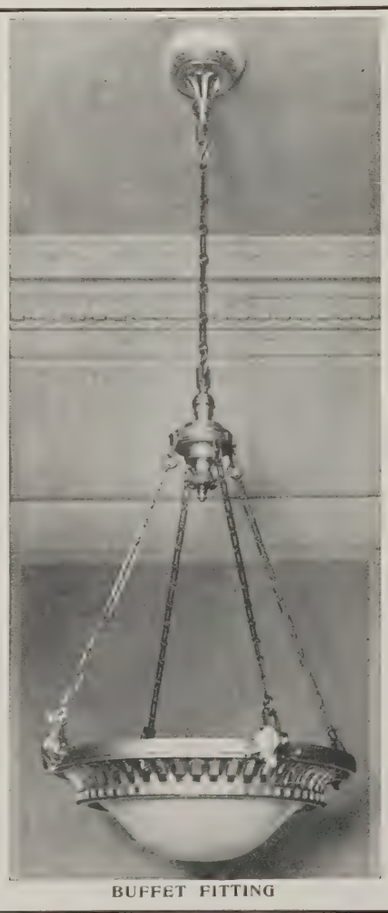
Another form of light carried on board was used to facilitate landing. Chemical flare lights had been used for that purpose, but more recently electric lamps had also been developed. Such lamps might be used in reflectors and mounted on the machine structure.

In France varied designs, comprising electric wing-tip lamps, fuselage lamps, and clusters of lamps mounted low down under the fuselage, were adopted. Ultimately gas-filled lamps of 1,000-2,000 c.p. were developed for that work, and as those lamps were run off a 12-volt battery and took 50-60 amperes, they had to be of special design and involved various problems, notably the sealing in of electrodes carrying such high currents. There was a consensus of opinion that, for landing, the electric lamp was as good as the chemical flare, and it had special advantages, such as the fact that it was under control and could be switched on and off for a definite period.

Aerodrome lighting involved lights used to indicate obstructions, illumination of the actual landing ground, and fixed illuminated signs to indicate the direction of the wind, etc. High wireless masts formed dangerous obstructions, and required to be lighted with sp care.

At Croydon and Lympne 60-watt l were placed at intervals along the r and highest points of roofs, masts, The lamps were enclosed in water fittings with outer red glass, and display of red lights afforded, inciden a good means of recognizing the drome. At the top of the very wireless masts 1,000-watt gas-filled la with a red outer cover, were placed, also down each leg of the mast.

The marking out of landing places been the subject of much study, important point being the mountin lamps in reflectors giving the nece wide angle of visibility. One arrange favoured for the purpose of markin landing areas was the arrangemen lights in the form of "L's," and lamps were controlled by special revo switches, so as to indicate, by the on the lamps, the direction of the Searchlights had also been proposed experimented with to facilitate lan But when the machine was alightin shadow-trouble was apt to cause diffi and the method was considered ur Searchlights might, however, prov value for the actual lighting of ground.



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iesday, April 5, 1922. Vol. LV. No. 1422

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

11.—CROIX DE GUERRE TCHÉCO-SLOVAQUE.
ANTOINE BOURDELLE, SCULPTOR.

27-29 Tothill Street, Westminster, S.W.1.

Sculpture. 5.—Le Centaure Mourant

Antoine Bourdelle, Sculptor

Le Centaure Mourant, a striking example of Bourdelle's symbolical style, and one of his most famous works, was produced in 1914. The bronze has since been acquired by the Municipality of Buenos Aires in the Argentine Republic. (See the concluding part of Mr. Bartle Cox's article on Bourdelle in this issue.)

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

...esday, April 5, 1922 Volume LV. No. 1422

Conference and Confraternity

NOT least of the many benefits that arise, immediately and directly, from the Building Exhibition is the fine opportunity it affords for fraternal meetings and greetings. Its social ...has been wisely and progressively developed and ...ded. Mankind being gregarious, the social attractions ... Welcome Club, the facilities it affords for old ...s to forgather, are irresistible, and, as the astute ...pters were prompt to realize, have contributed hugely ... success of the Exhibition as a resort for architects, ...rs, and merchants.

...may be supposed that, even more than London ...ects, those from the provinces appreciate the Exhibi... a rendezvous. For Londoners there are the ever-... doors of 9 Conduit Street and 34 Bedford Square— ... through which, unfortunately, they too infrequently ... Knowing they "can always do it when they want ...ll but a specially energetic few never do it at all. ...ver, the Soane Museum in Lincoln's Inn Fields is ...ntly growing in favour as a meeting-place for archi... doubtless because of the delightful urbanity of its ...ect-curator, who is always glad to "do the honours" ... Museum, and has an especially warm welcome for ... other-architects. All these institutions rejoice in the ... of country architects that the Building Exhibition ... fails to bring them; the country architect "up to see ...now" becoming more and more inclined to regard ...institutions as interesting addenda to it, and, with the ...al museums and picture galleries, clinching the ...ent as to whether the visit to London is worth while. ... a visit of the London architect to the country is also ... while, and should be clearly shown to be so. Such a ...istration is in progress. London and country mem... being drawn more close together by the excellent ...nvention of the annual provincial conference. This ...al having always done its utmost to promote closer ...onship between the architects of London and those ...sing in the Provinces, any legitimate movement ...ring that idea is secure of its suffrages; and the ...t so successfully initiated last year by the R.I.B.A. ...ding annual movable conferences we have always felt ... particularly "worthy of all acceptation" by all who ... at heart the best interests of the Profession as a ..., and who to that end desire to see the central body ...ser touch with what without offence may be called ...utposts of the organization.

...t year the R.I.B.A. Conference held at Liverpool was ...nly successful enough to fire the Cardiff architects ...emulation: and there can be no manner of doubt that ...ardiff Conference to be held on the 8th, 9th, and 10th ...ne next will be eminently successful socially and ...sionally. Cardiff architects may be trusted to main... heir reputation for graceful and cordial hospitality; ...hey should be very proud of the many fine buildings, ...nd old, that they can show the delegates—the City ... the Law Courts, and, as an interseting relic of ...ntry, Cardiff Castle. And then, the magnificent ...y of the Wye Valley!

...t the chief object of the visit is not to admire the ...y: there is business toward. For instance, Major H. P. Barnes, M.P., F.R.I.B.A., is to address the Conference on "Unification and Registration"—the all-absorbing topic of the hour. It is not essentially a contentious topic, and should not be allowed to acquire that sinister character. And, of all men, Major Barnes is the least likely to allow it thus to miss its true purpose, which is unity, not division; agreement, not dissension. An astute statesman (he is at all events steadily qualifying for that title), and the most fair-minded, cautious, and judicial of speakers, he may be depended upon to offend no prejudices, but to state the case for Unification and Registration as frankly, impartially, and luminously as it could possibly be put, seeking to elicit opinion rather than to smother it.

For what, after all, is the prime object of these provincial conferences—of all Institute conferences, but particularly of these, because they so markedly represent a forward step?—Surely the greatest good of the greatest number of members of the Institute—nay, may we not now venture to say, of the qualified Profession at large?—this being the predominant idea in seeking Unification and Registration (the one seemingly impossible without the other): subject, of course, to the superior object of rendering always due homage to the art itself. But how to secure this unity—that is the crux.

These provincial conferences seem so truly essential a feature of any rational system of organizing so scattered a profession that it is a marvel they were not inaugurated some half-century ago. Such conferences cannot fail to correct misunderstandings, allay prejudices, remove jealousies and suspicions, inspire courage and mutual respect as well as self-respect. On the arrival of the delegates it will be immediately perceived that they are not mandarins come to pay disciplinary visits, nor missionaries *in partibus infidelibus*, but simply delegates come to learn what they can of the minds, the needs, the aspirations of their provincial brethren. They come in the spirit of mutual edification—"gladly would they learn and gladly teach." They do not pose as *dii majores* descending unwillingly from Olympus, but as ambassadors of goodwill and good-fellowship, promoters of the *Entente* that should and does subsist between London and the provinces in this matter of the organization of the Profession of architecture.

They know full well, and will act in the spirit of that knowledge, that London has no monopoly of the fine buildings or of the skilled architects of this country. Londoners, in fact, harbour no such preposterously egotistic thoughts as those which, it is to be feared, the provinces quite erroneously attribute to them: the truth being that Londoners, instead of being loaded to excess with corporate feeling, have not nearly enough of it in their composition. Nor should it be overlooked how large a proportion of the multitude of architects practising in London are not natives of the metropolis, and are rather admired by the natives for being proud of their provincial origin; and strong reinforcements constantly arrive from the country. Hence the comparative absence from the Londoner of the local feeling by which the average countryman is honourably distinguished.

Then, again, it has to be taken into account that by no one less than by the Londoner is London regarded as the

Londoner's private preserve. He feels that it belongs to everybody. Anybody that likes is welcome to take a pride in it. So is it, in due measure, with the Institute. It belongs equally to every member, and every member ought to take a pride in it, and rejoice in it as his *Alma Mater*. It is to bring about a more vivid realization of this vital relationship between London and the Provinces, between the Institute and its every member, that the Provincial Conferences have been started. Every member should take as much pride in the Institute as if he were —as, indeed, he is—a part-owner of it, jealous of its influence and of its reputation, and anxious to take an active share in promoting its welfare.

It is only by meeting face to face in familiar talk that men may know quite definitely each other's minds, exchange experiences and ideas, resolve each other's doubts and perplexities, take courage and gain confidence from each other's example, revive enthusiasms and ideals that might languish for lack of sympathetic interest, develop fraternity, solidarity, and corporate feeling or *esprit de corps*. Through such meetings they will grasp more firmly the truth that the Institute is national, not local, existing for the equal benefit of all its members, and, withal, so liberally and democratically (in the special sense opposed to autocratically) conceived, constituted, and controlled that (Cornwall consenting) it might well adopt as a supplementary motto, "One and All."

It is essential, of course, that the Institute's activities should include discipline. To discard it, to abandon authority, would render the organization futile; but the Affiliated Societies in the Provinces know full well that this discipline is never harshly exercised—that they all enjoy the most complete freedom of action and the most perfect autonomy compatible with "playing the game." But also the Council has, from the outset, recognized clearly the value and importance of social functions, of social intercourse, of the amenities of entertainment and hospitality; and recent years have seen a notable extension of the social side.

But there is certainly no need to labour the point as to the value of Provincial Conferences. It has never been, and is not likely to be, questioned by anybody. Conferences, however, and even the Institute itself, are by no means exempt from the universal susceptibility to improvement, the universal law of progress, which is the law of life. To stand still is to perish. In the process of evolution, the Institute itself will, it may be anticipated with every confidence, acquire through these Provincial Conferences a renewal of strength, a fresh accession of efficiency and influence; because by this means it will become patent to every observer that the Institute is more than a club in Conduit Street: its conduits, vitally supplied, serving and nourishing and invigorating the whole professional organism.

Mr. G. Gilbert Scott, R.A.

It is again strikingly seen that heredity counts for much. Mr. Giles Gilbert Scott, the new R.A., is son, nephew, and grandson of eminent architects, and has inherited their talents and their traditions. His grandsire, Sir George Gilbert Scott, the great Gothicist, was elected A.R.A., and also R.A., rather later in life than his grandson has achieved these distinctions. Sir G. G. Scott was A.R.A. at the age of forty-four, and was fifty before he obtained the full R.A. Mr. Giles Gilbert Scott was elected A.R.A. in 1918, at the age of thirty-eight, and has now become a full R.A. at the early age of forty-four. But then he was always precocious; when he won the competition for Liverpool Cathedral he was but one-and-twenty, which is quite fairly comparable to Pitt's becoming Prime Minister at that age. "Giles," we have always understood, is a name bestowed on him in commemoration of his grandfather's finest achievement in church architecture—the Church of St. Giles, Camberwell. All architects concur that the architect of Liverpool Cathedral has qualified magnificently for the honour that

MR. G. GILBERT SCOTT, R.A.

the Academy has bestowed upon him, and incidentally upon itself.

Unification and Registration

The Council of the Institute are to be congratulated on their circular respecting Unification and Registration. As a clear and impartial statement of the present position, "the stage which has now been reached," it will be generally welcomed, more especially by those provincial members who, precluded by distance from attending the meetings in London at which these matters have been and are to be discussed, have had hitherto to depend on reports of meetings, on a more or less desultory correspondence in the professional Press, and, above all, on an *ex-parte* statement with which they were circularized by independent members. It is in the provinces that the need for Registration is most keenly felt, and it is there that information on the subject is most scarce and most eagerly sought. Hitherto such information has been but partial and casual, and has usually taken the form of specious special pleading, or the stressing of some particular phase or sectional interest. Now we get a judicial summary of the issues that are to be met, and one reassuring feature of the manifesto is the explicit statement that no binding decisions of any kind have been made, and that at the end of exhaustive discussion the general body of the R.I.B.A. will be asked to consider the Council's ultimate recommendations and give a definite verdict on them; every member of the Institute having the opportunity of expressing his opinion by a postal vote.

Our Building Exhibition Competitions

Mr. W. G. Newton, M.C., A.R.I.B.A., the assessor in our Building Exhibition Competitions, has now made his award, and we shall publish the names of the various prize-winners in our next issue. Two designs have been received without any covering letter, and we are therefore unable to identify them. One bears the motto "Salonika," and the other, of a stand "to be erected principally in brick and tile," is a pen-and-ink drawing, and shows a columned treatment with rafters exposed above the architrave. We shall be obliged if the authors of these designs will forward name and address.

ıtoine Bourdelle: A Great French Sculptor

By H. BARTLE-COX, A.R.I.B.A. (Membre corr. de la S.A.D.G.)

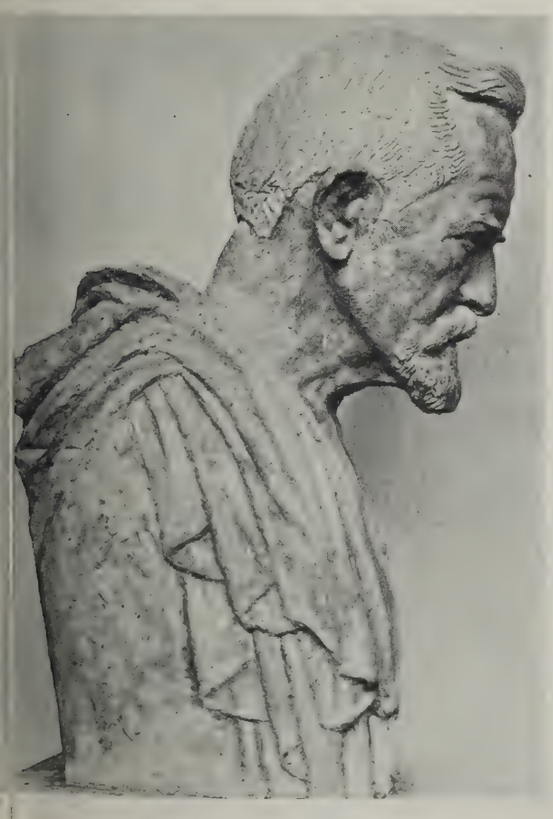
(Concluded from last week's issue.)

e decorative quality in art has two aspects: (1) Imper- and Ideal (which appeals to Bourdelle), like Egyptian ture and Byzantine mosaics; (2) Realistic and Pre- ous (which annoys Bourdelle), like later Renaissance ings. The former tends to become conventionalized old, and the latter ostentatious. The æsthetic role of pleasing quality is open to much discussion, but is inly the easiest to appreciate, and for that reason is by the propagandist. For the modern artist, however, only cares about the opinions of connoisseurs, there is rked tendency to regard a decorative work of art is not done frankly for a decoration) with a certain g of mistrust.

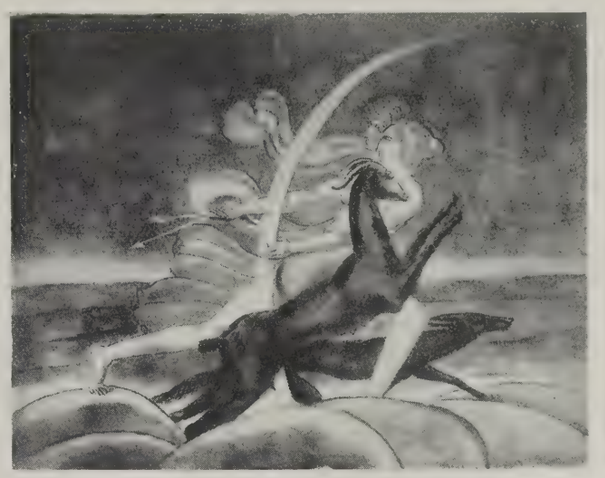
e public, who like pretty things, fear philosophical s that are too harsh and only feign to admire their y when established by authority. The vulgar imagine a thing that is ugly in nature is not a fit theme for an . According to Paul Gsell, Rodin says: It is only the r of Character that makes the beauty of Art. That is no ugliness in Art except that which has no cter.

ardin, who died unknown and in poverty, who con- d himself chiefly with Still Life and small subjects equently not a popular favourite), is regarded by delle as the greatest of French painters. Art then is nger for the public, but for the initiated.

force of circumstances sculpture, like painting, must ne more and more an intimate art suitable for rich salons and state museums. Amusements and y, so necessary that they become a creed to all with e, are trivial pastimes æsthetically unjustifiable unless led by the artist, but if he be one that can see a God Devil he will not be understood by the vulgar, and if he flatter the taste of the populace he is base to himself. Therefore the only justifiable modern form of art, from a public point of view, is extreme simplicity and rigid economy.



8.—SIR JAMES G. FRASER, LL. D.



9.—LA NOCTURNE ARTÉMIS (FRESCO), THÉÂTRE DES CHAMPS ÉLYSÉES

On this reasoning sculpture is esoteric in the higher sense and only pretty amusement in the lower. It is on this principle that sculpture really can have a separate existence from architecture. What then is the probable future for sculpture as a fine art?

Rodin, whose great mind cared little for the ornamental side of art, probably instinctively felt this trend of civilization, for his genius was bent on the interpretation of the human element. Who could call his group, Les Bourgeois de Calais, decorative? But what force, what interest, what consummate art!

We cannot build like the ancients, our ideals have changed. Iron, concrete, and artificial materials in the hands of mathematicians are the factors in modern building æsthetics. Sculpture (clay, stone, bronze, etc.), in the higher sense, is a mere servant to the new æsthetics, or it is a religion apart. Had Rodin devoted his attention to the decorative or more obvious side of his art he would certainly not have been so great a master of the art-attitude of his age. Most of his works have been executed, except his large scheme for La Porte d'Enfer, of which the parts are undoubtedly more interesting than would have been the ensemble.

Repose in art is very nice for tired brains, but rapidity and agitation is the spirit of the times. It would seem that decorative and static representations have seen their best days, and that we are living at a transitional period in which all the arts are endeavouring to express the intangible. This is more in keeping with the advance of science and more ideal than the presumption to fixity.

The Rodin animality towards art is, perhaps, the last phase of the human attitude, opening the way for a healthier, less personal, and more permanent understanding of æsthetics. It is probably the last phase of sculpture likely to have a noble or ignoble calling in the future, for it is difficult to believe that the artistic synthesis of any useful object, such as a motor-car or a building, will, in the future, be in the hands of an architecte-sculpteur. Be that as it may, and, despite the fact that Bourdelle has an avowed predilection for the decorative quality in art, he is nevertheless perhaps the greatest sculptor of the

day. As a teacher of the Transformation of the model he is a creator, and as a good workman and a sensitive poet is endowed with the power of expressing external and internal truth.

A Complete Artist

An enumeration of all the works of this sculptor, painter, architect, poet, would be fatiguing, but he has written, drawn, coloured and carved; and besides the usual studies of an ordinary sculptor—Faunes, Ledas, Bacchantes, Pallas, Bacchus, Jeanne d'Arc, Homer, etc.—he has executed pastels, mural decorations, book illustrations.

Bourdelle is a great draughtsman, and always expresses himself; he can if he likes do work of an academic nature, but he has a message of his own, and that is what makes his personal works important to contemporary art.

A study dear to the master is the bust of Beethoven. He has made over twelve interpretations of the great musician's mentality, one of which can be seen at the Musée du Luxembourg. He has executed a bust of Ingres and an interesting statue of Carpeaux. Various busts of many women of note besides portraits of intellectual celebrities including Dr. Koeberlé (French surgeon of Strasbourg), Mécislas Golberg (the poet), Anatole France (the writer), Sir James G. Frazer, LL.D. (the anthropologist), recently fêted at the Sorbonne, together with Rudyard Kipling, when they were both made Doctors "Honoris Causa" of Paris University (Fig. 8). Bourdelle has recently been commissioned to design monuments to the poets Emile Verhaeren, Jean Moréas, Charles Baudelaire.

Four of his most justly renowned statues are the following:—

1. *L'Héraclès archer*, or L'Héraclès tue les oiseaux du Stymphale. Perhaps the most widely known of all his works. Bourdelle's universal fame seems to date from the exhibition of this masterpiece (1909). The implacable energy and impersonal expression on the face of the god bent on killing the monsters of the earth is of a[l] import. The statue was ordered by the Italian G[o]ment, and is exhibited at the Musée Moderne at Rom[e] gilded bronze replica is in the possession of Prince E[u] of Sweden (see Plate).

Photo: Roseman.

10.—PÉNÉLOPE ATTENDANT ULYSSE.

2. *Le Centaure mourant.* The bronze of this prodi[g] monster has been acquired by the municipality of B[u] Aires in the Argentine Republic. It is an exam[p] Bourdelle's symbolical style. 1914. (See Frontispie[ce])

3. *Rodin travaillant a sa Porte de l'Enfer.* A wo[rk] very great artistic importance not yet exhibited in [P] (Fig. 11).

4. *Pénélope attendant Ulysse.* Strength, delicacy[,] sympathy are all alive in this statue, which created a s[en]tion at the Salon of 1912 when it occupied the centre [of] Rotonde. Monsieur A. Le Chatelier (Professeur au C[ol]de France), of whom Monsieur Bourdelle has made a[n] trait bust, writes a eulogistic appreciation of this stat[ue] the publication "La Vie." He says: If there be s[ome]thing as absolute beauty, our art is nevertheless humar[n] therefore reflects personal feeling. It is thus that so[me] for accepted canons and others for minute details.

Bourdelle goes in the direction in which his soul c[ar]him towards a realm of lyrical rhythms impreg[nated] with vitality. With reference to the Pénélope he [says] "On dit: 'Canon grec, quant au rapport des têtes,' [mais] qu'importent les propos d'Ecole! Regardez: tout en e[lle] cellule vivante, masse animée, structure organique." [In] another part he says: One had admired (in the ma[rble] atelier before being placed in the badly lighted Rot[onde] the abandoned nobleness, the lassitude, resigned an[d] ready to revive, in all the flesh and members of that wo[man] still a wife in her long waiting (Fig. 10).

So much for some of the monuments, statues, and [bas-reliefs] of the world's greatest sculptor. Bourdelle is a[lso a] painter of recognized talent. At the Théâtre des Ch[amps] Elysées he has carried out thirty large frescoes pa[inted] direct on plaster, composed of archaic motives, treat[ed in] a modern style full of movement and imagination, r[epre]senting for the most part mythological subjects (Fig. [11]).

Several years ago he had to suspend handling clay [owing] to rheumatism, and took to pastels. He did many [fine] traits, and was considered by specialists as the le[ading] pastellist of France. He has, besides, a collection of [over] two thousand large compositions in watercolours, an[d has] illustrated for the Société Littéraire de France a [book] entitled "La Reine de Saba." He has a decided literary [turn] of mind, is fond of philosophy, and of the poetry of Fra[nçois] Villon, as well as that of the modern Mallarmé. He [is an] enthusiastic speaker, and has written several articl[es on] art. Like Michelangelo, he has composed many sone[ts]. He is an admirer of Mistral, and is fond of his own La[n]docian dialect.

In La Revue de France, published by La Renaissan[ce du] Livre, under the literary direction of Marcel Prévos[t] l'Académie Française) there is an appreciatory artic[le] Jean-Louis Vaudoyer on Emile-Antoine Bourdelle, a[nd] the same number (October 15, 1921) an important a[rti]by Antoine Bourdelle himself entitled "La Matiè[re] l'Esprit dans l'Art." This should be read by all inter[ested] in his work, for it throws much light on his poetic and [plas]tic temperament.

Bourdelle has lived and had experience. His work [is] not milk for babes, but meat for grown-ups. He has [been] married twice, has a son by his first wife and a daught[er] his second. He has visited England and has travelled [in] Holland, Italy, and Poland, etc. He has ten ateli[ers] Paris, and is always pleased to welcome bona-fide vi[sitors] at 16 Impasse du Maine. He receives in the afternoo[ns] the first and third Saturdays. His wife, who is G[er]speaks English remarkably well.

Like all strong personalities, Bourdelle is by tha[t fact] a revolutionary, but not an "Indépendant" in the sen[se] one who ignores the lessons of the past. Controversy [over] his works is due not so much to the works themselves [as] the lesson they contain. The advocates of the old R[ule]

Sculpture. 6.—L'Héraclès Archer

Antoine Bourdelle, Sculptor

Photo : Roseman

This statue of the god is possibly the widest known of all Antoine Bourdelle's works. The date of its exhibition, 1909, is a landmark in his career ; it brought him international fame. The influence of Rodin is strongly apparent, but nevertheless Bourdelle's personality here finds its most powerful expression. Rodin's dynamic vigour is not imitated, but rivalled. Bourdelle in creating such a god places himself amongst the immortals.

11.—RODIN TRAVAILLANT À SA PORTE DE L'ENFER.
ANTOINE BOURDELLE, SCULPTOR.

would not fear him so much were it not for the singular authority he has established in every country.

With respect to his taste, he says himself that as a Frenchman he is, to a certain extent, tied in by classicism, but that his own particular bent is for primitive exuberance. His great god of antique sculpture is the pediment of the temple of Zeus at Olympia. He recognizes the superiority of Phidias in his best works, but prefers the robust joyfulness of the Tanagra figurines to the somewhat facile sameness of the Panathenaic frieze.

Those who know the man and his works instinctively feel that he would prefer the masculine creative power of the "Iliad" to the feminine finish of the "Æneid."

Bourdelle does not go in for literature in his sculpture, and there are no conundrums or anecdotes in his works. Through a misunderstanding of art, he was formerly severely criticized in France by that type of journalist who assumes the title of "Critique d'Art"; but now that he is recognized by authorities, some writers go to the other ext Ignoring the technical side, they find qualities of a my nature, and talk a lot of pseudo-poetical nonsense wh detrimental to the artistic reputation of the master. hierophant style lends itself to their cant, which is lia make him appear as a poseur. This is most unfortu for Bourdelle, while steeped in mythology and po in temperament, is a technically well-equipped natural in his demeanour.

Many a man is a genius who, through lack of sc cannot produce lasting works. Many have much s who, through lack of genius, cannot produce works make an effect; Bourdelle has both.

When a sculptor contemplates a work of Bourdell has the conviction that the author is sure of himself he has produced it without hesitation or repentance. connoisseur may like it or dislike it, but admits it t true work of art.

G. Gilbert Scott, R.A.

At a general assembly of Academicians and Associates of the Royal Academy of Arts, Mr. Giles Gilbert Scott, A.R was last week elected a Royal Academician. He was elected A.R.A. in 1918 *at the age of thirty-eight.*

VERY few architects, and still fewer ecclesiastical architects, have stepped into fame with the dramatic suddenness that was characteristic of Mr. Gilbert Scott. The circumstances may be recalled. In 1904 the Liverpool Cathedral Committee promoted their historic open competition, and a vast number of designs were submitted. Out of these, five were selected: those of Messrs. W. J. Tapper, Austin and Paley, C. A. (now Sir Charles) Nicholson, Malcolm Stark, and Mr. Gilbert Scott. A further competition was then held, with the result that Mr. Scott was declared the winner. Most people remember the hubbub that followed the announcement. Vigorous protest was raised—not, indeed, against the design, but against the youth of the architect. Mr. Scott was then only twenty-two years old, and had only just completed his three years' articles. This was the first competition he had entered. How, therefore, could he have the experience necessary to carry through an undertaking of this magnitude? The committee wobbled, as committees will in the face of an outcry. Finally they compromised. Mr. Scott should be the architect of the new cathedral; but Mr. G. F. Bodley, who had reached the height of his great reputation, should co-operate with him. On these terms the matter was settled. Messrs. Bodley and Scott worked together for four years, at the end of which Bodley died, and Mr. Scott stepped into the position of sole architect.

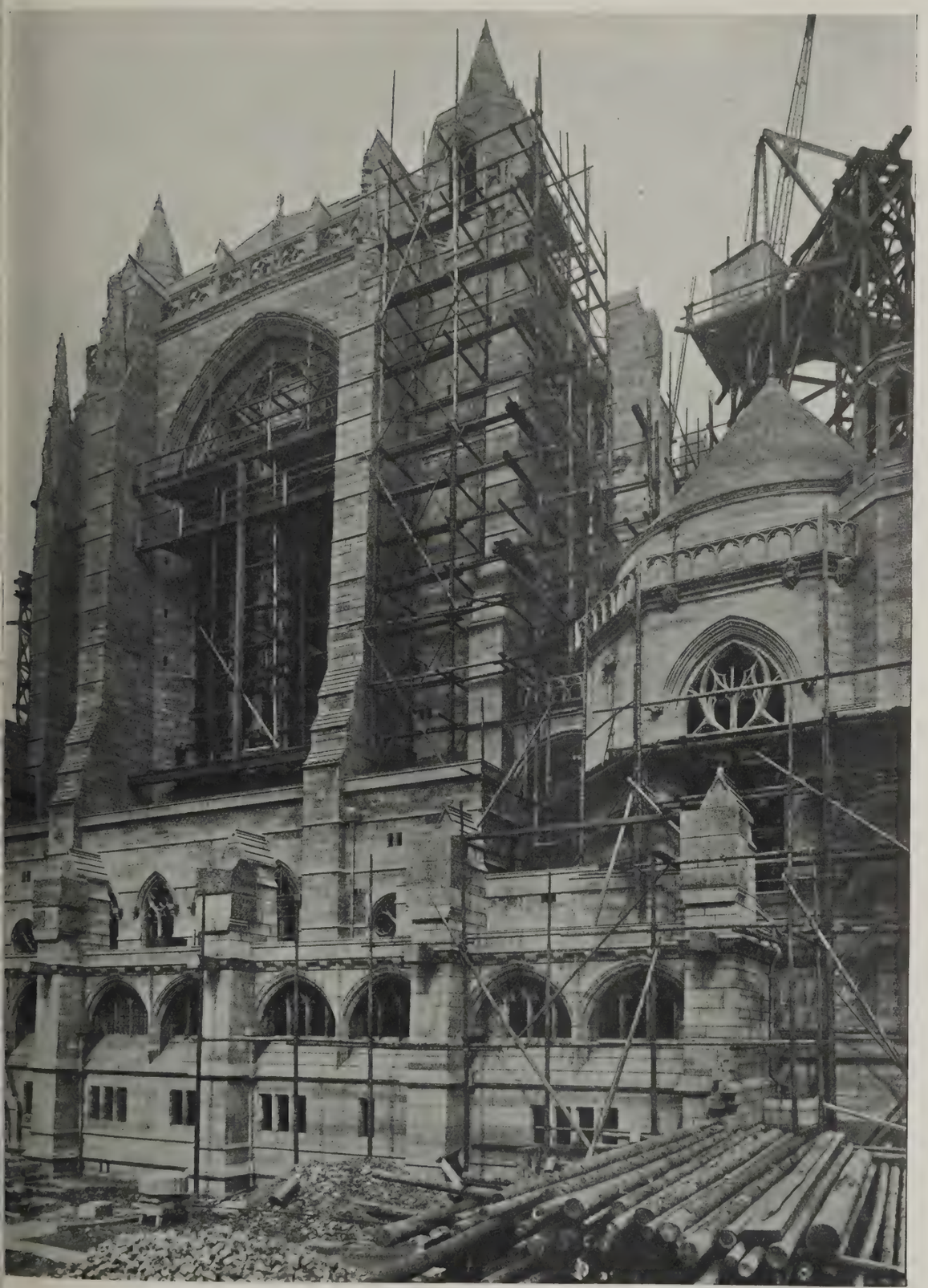
Mr. Scott's victory was really a remarkable achievement. His architectural training had been slight, even for an age when there was as yet no hint of the stringent tests that are now applied to an architect's professional education. He was articled to Temple Moore for three years, during which time, he tells us, he attended evening lectures on construction. That was all: no schools, no examinations, and no long studentship abroad. It was during the last six months of his term with Temple Moore that he began to work on his cathedral design, at first with a fury of enthusiasm and hope, later with much self-criticism and a growing feeling that it was useless to proceed with it. In fact, for a time it was dropped altogether. But a friend who called upon him one day saw the work and the rare promise that lay in it, and urged the young architect to buckle to once more. This was done, and the lost time made up, with the result which we know.

Since Mr. Scott assumed sole charge of the cathedral the work has proceeded virtually without any sort of friction between architect and committee. The fact is worth noting in that, in view of the very important modific of the original design that have been made from ti time, it suggests that Mr. Scott possesses powers add to those of a mere architect—that he has, in short, h method of getting his own way with patrons. On surmise that a very fair amount of sweet reasonab and persuasiveness was needed in order to carry th the very drastic alterations that have been made design. Frankly, the Liverpool Cathedral, now complete, is barely recognizable as the cathedral pro by Mr. Scott in 1904. Notes on the changes made appeared from time to time in the professional pres here it is only necessary to recapitulate the most imp of them. It was not long before Mr. Scott discovere his elevations suffered from excessive verticality found himself yearning for the simplicity of cont horizontal lines—in fact, for a general simplification design. To effect this he decided to abolish the two towers that figured in the original, and to substi single tower. This change was carried out in 1913. the transepts, which were formerly on either side choir, have vanished, and the low bays have been with the idea of getting a simpler skyline. The re that what the cathedral has lost in "picturesque" de has gained in mass, symmetry, and dignity. The other modifications were accepted seemingly with struggle.

What is immediately to the point is that the c in the cathedral reflect accurately the stages in Mr. general architectural development. Bodley was means an extreme or perverted devotee of the cult, but since his death Mr. Scott has travelled deal farther in the direction of classicism.

Mr. Scott has never taken up this or that phase of Gothic or Classic with a view to mere empty ex tion. He has been drawn from the Gothic to the side by the gradually dawning recognition that former there were elements of impermanence incom with the honest maturing of his artistic gift. Cla with him is an inevitable necessity, not a del cult.

As everybody knows, Mr. Scott has been almost identified with ecclesiastical architecture. Follow first and most important commission at Liverpool, instructed to prepare designs for a new church at P mouth. This work occupied the years 1905–6. Th striking feature of the building is the relative height

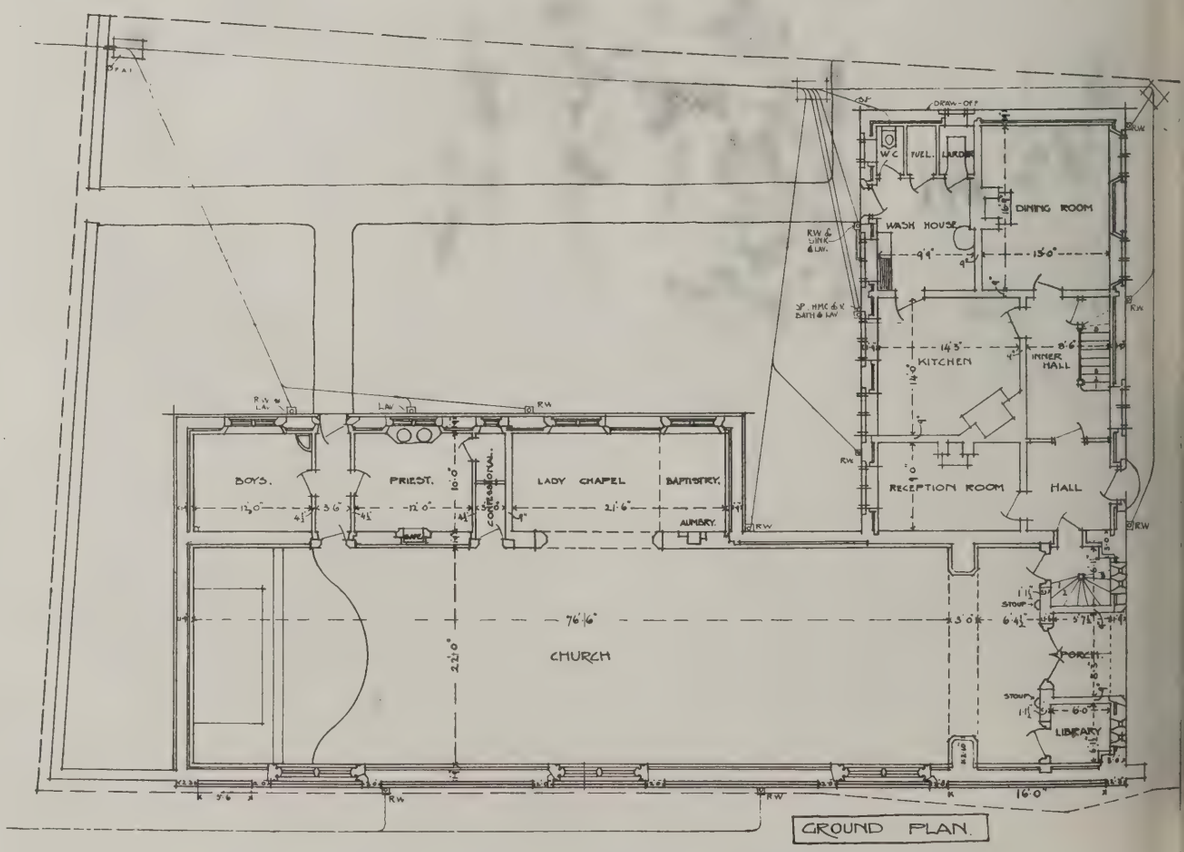


LIVERPOOL CATHEDRAL: EAST END, SHOWING CHAPTER-HOUSE ON RIGHT.
G. GILBERT SCOTT, R.A., F.R.I.B.A., ARCHITECT.

LIVERPOOL COLLEGE FOR GIRLS, HUYTON: INTERIOR OF PROPOSED CHAPEL
G. GILBERT SCOTT, R.A., F.R.I.B.A. ARCHITECT.

CATHOLIC CHURCH, NORTHFLEET, KENT: TOWER AT WEST END.
G. GILBERT SCOTT, R.A. F.R.I.B.A., ARCHITECT.

BEAUMONT WAR MEMORIAL.
G. GILBERT SCOTT, R.A., F.R.I.B.A., ARCHITECT.



PLAN OF CATHOLIC CHURCH AND PRESBYTERY, RAMSEY, ISLE OF MAN.
G. GILBERT SCOTT, R.A., F.R.I.B.A., ARCHITECT.

and the transepts. It usually happens that the nave church is carried as high as circumstances permit, the septs being kept comparatively low. Here the reverse e case; the nave has been kept low, and the transepts comparatively high.

1908 Mr. Scott's designs were accepted for a new ch and adjoining buildings at Sheringham, Norfolk. church itself was not built till 1910, but the Priest's e was erected two years earlier. The presbytery wed in 1921. These structures are of red 2-in. brick, the arches of the church are constructed of Weldon e. The interior of the church is richly equipped. One es especially the reredos, with its painted devotional ls. Four of the latter are copies from an old Norfolk n. The altar is of white marble, and among the tional details may be noted a beautifully painted and d reliquary case. There is also a large hanging rood, ing the junction of the nave and chancel. The church e is 61 ft. long and 33 ft. wide.

e proposed chapel for the Liverpool College for Girls eresting as an essay in the classic manner, Mr. Scott's , as we have already mentioned, being mostly Gothic aracter.

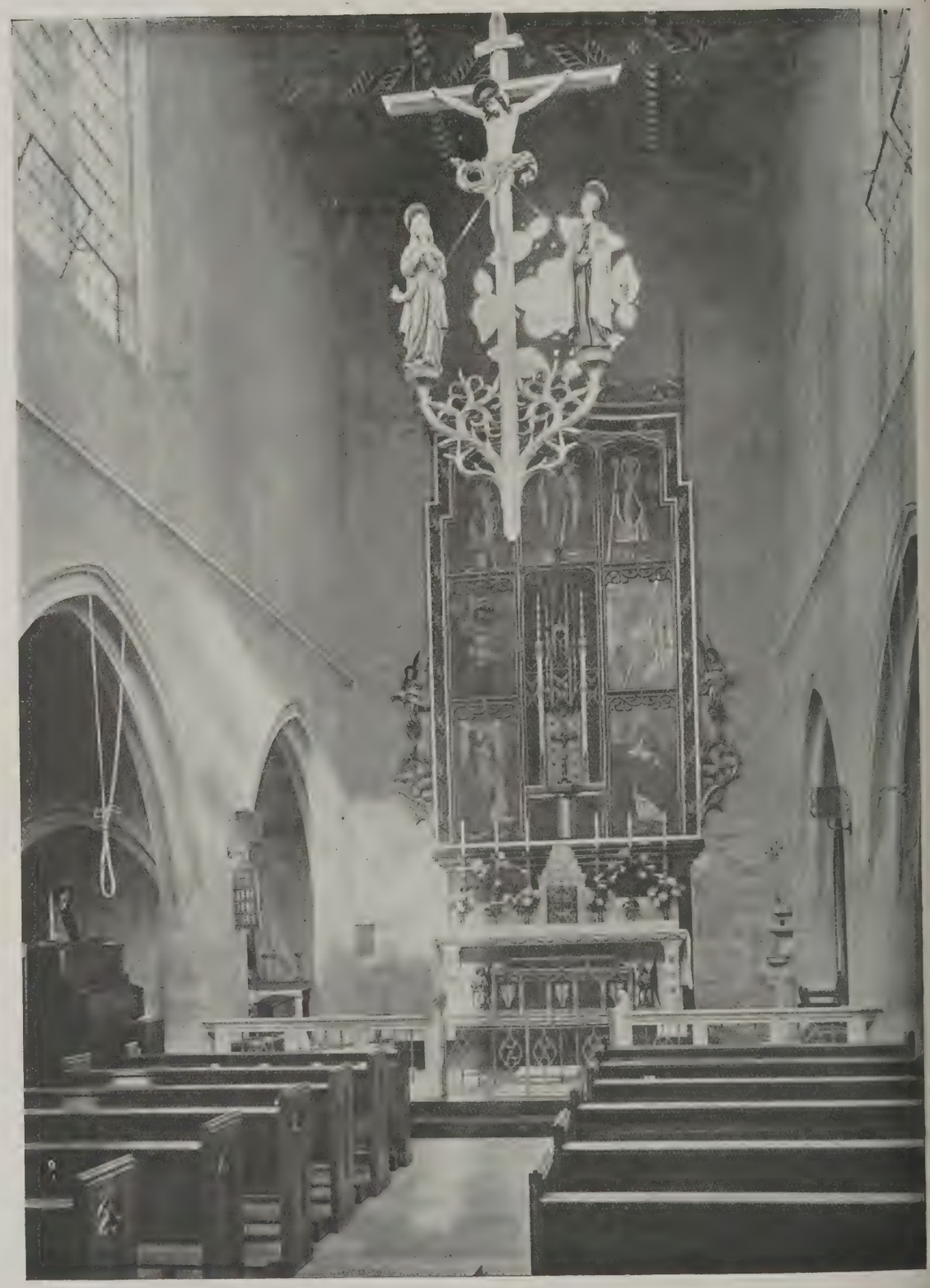
e Beaumont War Memorial, which was done in partnership with his brother, Mr. A. Gilbert Scott, is a powerful and arresting design. It is of Portland stone with bronze detail.

The new Catholic Church at Northfleet occupies a commanding site overlooking the Thames, the tower being a landmark for miles around. The fabric is built of 2-in. Crowborough bricks, and considerable use has been made of reinforced concrete for roofs and for lintels. Accommodation is provided for 380 worshippers. The cost of the work was £6,648.

The Catholic Church and Presbytery at Ramsey stands on an exposed site facing the sea. It is not orientated. The external walls are hollow, the outer thickness being of rubble (obtained from old buildings demolished on the site), and the inner thickness of smooth local bricks; within the church these latter are limewhited instead of plastered. The stone used for the church windows, the doorways, the arches, etc., is Bramley Fall. The roofs are covered with greyish-red sand-faced tiles. On the (quasi) south side are the Lady Chapel, baptistery, and vestries. At the (quasi) west end is a choir gallery under the tower arch. The internal length of the church is 76 ft. 6 in., and the width 22 ft. There are no aisles.

Photo: Cyril Ellis.

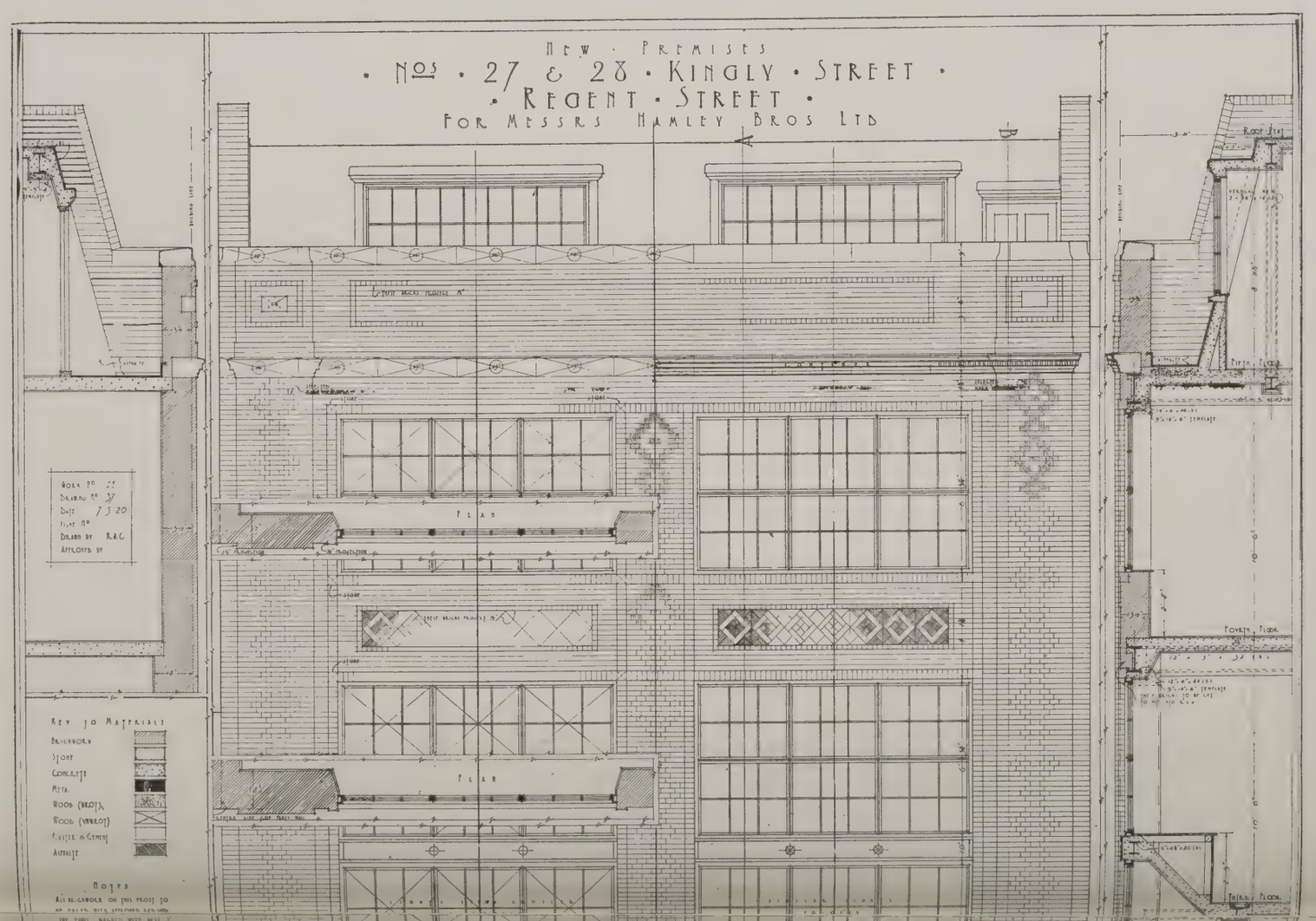
CATHOLIC CHURCH AND PRESBYTERY, RAMSEY, ISLE-OF-MAN.
G. GILBERT SCOTT, R.A., F.R.I.B.A. ARCHITECT.

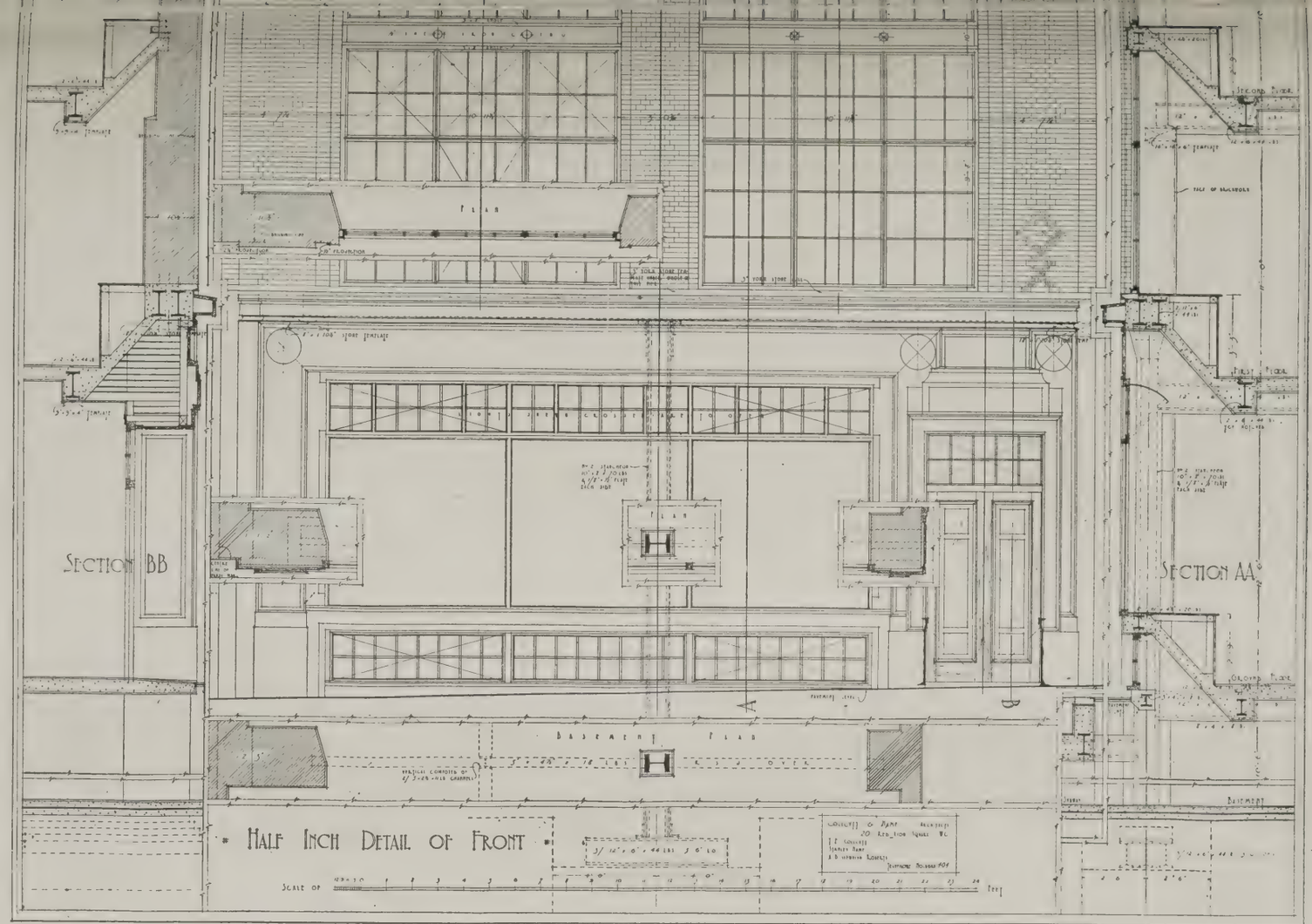


CATHOLIC CHURCH, SHERINGHAM, NORFOLK: INTERIOR SHOWING HANGING ROOD AND REREDOS.
G. GILBERT SCOTT, R.A., F.R.I.B.A., ARCHITECT.

Architects' Working Drawings. 54.—Messrs. Hamley's Premises, 27-28 Kingly Street, London

Stanley Hamp, F.R.I.B.A., Architect (Collcutt and Hamp)





This warehouse, just erected from the designs of Mr. Stanley Hamp, stands in Kingly Street directly behind the Regent Street shop belonging to Messrs. Hamley Bros. A maximum supply of daylight was essential, and it will be seen that, besides providing a large window area, the architect has dropped his floors (in all cases excepting the two top stories) below the bottom of the window level, thus effecting a surprising increase in the lighting of the very large rooms. An interesting design has been introduced into the brickwork by the use of red bricks with dark headers.

NEW PREMISES FOR MESSRS. HAMLEY BROS., KINGLY STREET, LONDON.
STANLEY HAMP, F.R.I.B.A., ARCHITECT.

MESSRS. HAMLEY BROS'. NEW PREMISES, KINGLY STREET: LOWER PART OF FAÇADE. STANLEY HAMP, F.R.I.B.A., ARCHITECT

Hamley's New Building

The new building for Messrs. Hamley Bros., Ltd.—Nos. 27 and 28 Kingly Street, W.—has been designed in a manner eminently suited to its purpose, that of housing wholesale firms engaged in the soft goods and similar trades peculiar to the West End of London. This necessitated a maximum supply of daylight, and Mr. Stanley Hamp, F.R.I.B.A., of the firm of Collcutt and Hamp, architects, has made this the governing factor in the design of the building. Interest has been imparted to the façade by the use of red bricks with dark headers, and also by the manner in which the window surfaces are handled. The bricks in question are thin Daneshill sand-faced bricks.

The building throughout is of fire-resisting construction, the concrete floors being reinforced with B.R.C. fabric. The roof is covered with asphalt supplied and laid by Messrs. Lawford & Co., the white glazed bricks to the central area being obtained from the Farnley Iron Company. The metal casements throughout were supplied by Messrs. Haywards, Ltd., the ornamental ironwork by J. Stone, St. George's Road, S.E., and the lift, together with enclosure, by Messrs. Marryatt and Scott. The general contractors were Messrs. J. W. Falkner and Sons.

L.C.C. Scholarships

The London County Council will be prepared to award in 1922: (*a*) twenty-five technology and science scholarships; (*b*) twenty-three art and artistic crafts scholarships. The scholarships will be tenable for two years at full-time day courses at institutions at which higher instruction in technology, science, art, or artistic crafts is given, and may be extended for a third year. They will enable students who are engaged in trades or occupations, and have attended evening classes for at least two years, to give up their day-work and pursue a course of advanced instruction in engineering, building, etc. In some cases a maintenance grant, assessed on the merits of each individual case, will be provided, but it will not exceed £160 a year. Candidates must be British subjects, resident in London. They must be not less than eighteen years of age. Application forms T $\frac{2}{2\,5\,5}$ may be obtained from the Education Officer (T. 2*a*), Room No. 539, New County Hall, S.E.1, and must be returned *not later than May* 1, 1922. Particulars of all scholarships offered by the Council appear in the L.C.C. Scholarships Handbook, which may be obtained from P. S. King and Son, Ltd., 2 and 4 Great Smith Street, Westminster, S.W.1, price 3d., or by post 4½d.

Mr. Webb at Liverpo

Mr. Maurice E. Webb, F.R.I.B.A., in reading a paper on "Present-day Architectural Problems" before the Liverpool Architectural Society, referred special reference to the School of Architecture at Liverpool University, which he congratulated on having become such an important influence. As a member of the Board of Architectural Education he was interested to watch the broadening lines of education that was being given in the schools, and it was on those lines that progress would be made—that was, in education in art as well. He strongly advocated that architects in private practice should be retained more than they were on designs for important buildings in which the Government were concerned, and in this connection he congratulated Liverpool on the appointment of Mr. Thornely in connection with the proposals for a Belfast building. Another side of this question was the repair work on ancient monuments, and he contended that restoration work should be split up amongst the local men, who, knowing the traditions of the county in which they lived, would have more reverence for the ancient monuments than a man who was sent from the Office of Works.

Water—Its Storage and Filtration

Mr. Henry E. Stilgoe, M.Inst.C.E., chief engineer to the Metropolitan Water Board, recently delivered a Chadwick public lecture at the R.I.B.A. on "Water—Its Storage and Filtration." Mr. G. W. Humphreys, C.B., M.Inst.C.E., Chadwick Trustee, occupied the chair. Mr. Stilgoe said that by the Thames Conservancy Act the Metropolitan Water Board may not take more than 130 m.g. per day unless the flow over Teddington Weir exceeded 200 m.g. per day, and that the quantity of water taken from the Thames was governed by the provision of storage capacity. The present storage reservoirs in the Thames Valley had a capacity of 6,600 m.g., and a new storage reservoir was being constructed at Littleton, near Staines, which will have a capacity of about 6,500 m.g. and an area of nearly 800 acres. The lecturer showed some interesting slides of this reservoir which he believed to be the largest artificial reservoir of its kind in the world.

The lecturer then referred to storage provided by subsoil formations which retain water for the supply of wells, and pointed out how much more serious the position would have been during the long dry seasons of last year and since, if not our rivers been fed by the springs from underground storage. An account was given of processes being applied at the Metropolitan Water Board Works at Barn Elms to obtain a greater supply of filtered water without constructing additional filter beds, which even at pre-war rates would cost about £10,000 per acre. A battery of rapid filters was to be installed in which the larger matter in suspension and larger organisms would be arrested before the water passed to treatment in the slow sand filters. If the Algae, wholly or partly, could be arrested by those rapid filters, considerable additions would be made to the life of the sand filters.

[r. Gilbert Bayes on "The Treatment of Sculpture in Architecture"

'HE relation of sculpture to architecture is a fascinating subject. The conflict of ideas between the tor and the architect is an old one, there are stories told of disagreement een great masters from ancient s until our own day.

e architect says to the sculptor: I d like you to fashion something to his place which will enhance my ing as a whole, but which must be rdinate to it, and subordinate to any of my architectural features; it be in perfect keeping and perfect

e sculptor goes away and says: architect is a selfish man; he would me out of existence. I will be ful of all that he has said, but I will something that will astonish the lder; in years to come my group may e one redeeming feature on the whole e façade.

e result is an unhappy compromise, n the case of most modern build- no sculpture, and, in the case of modern street memorials, no archi- re.

ere are two schools of thought on matter. One may be called the school, the other the Dynamic.

e one says that sculpture as applied chitecture should be something that egrally a part of the whole creation, hat it should in no wise be empha- or call for special attention unless rchitect chooses to regard it as focal

e other says that all creative work dividualistic, that the work of a tor should have an intrinsic value own, and that in subject-matter endering it should have an existence from the building. In fact, that sculpture were taken off the build- he sculpture might gain something the building certainly would lose thing.

e strange part of it is that both ideas are right, and they are both le of expression.

France, where sculpture is more a of the habit of thought of the country it is here, controversies have gone this ground again and again, and men have come, and with the right g and atmosphere have made some- which has been so good that it d that either of these conceptions be right.

ce, for instance, the statue of Maré- Ney, by Rude, in Paris: that vigor- gure of a soldier in the moment of g his men on to victory; weight n forward on to the right leg; right vigorously waving the unsheathed , and the head turning back shout- he word of advance. The man is d in the moment of battle, and one ited to see him.

trast with this the figure of Joan by the same sculptor. The figure e woman is quiet, so very quiet, looking at the Maréchal Ney. A comparison would be to contrast f the sculptured groups on the Arc iomphe.

The "Triumph of Napoleon" by Cortot is quiet and dignified; the very figure of the angel above has become set and still. To take the group away from its architectural setting would be to make it uninteresting. "Le Départ," by Rude, is dynamic in every particular. The virile excited figures are almost rushing off the scene; but not quite, and in that lies its greatness and the greatness of the sculptor. The figures on the tombs in the New Sacristy of San Lorenzo, Florence, are nearly slipping off; but Michelangelo has arrested them: he has drawn our interest away from the precarious postures.

There is no more interesting reading for the architect than Charles Garnier's own account of his building of the Opéra in Paris, and of the charming manner in which he relates how the sculptural work was undertaken. The magnificent front of the Opéra at Paris is adorned with four main groups of sculpture, of which the group "La Danse," by Carpeaux, is by far the most famous. It is, incidentally, the most vigorous and the most virile.

He relates somewhat in this fashion: "And when the time came for me to apportion the sculptural work I was at loss what to do, for although I had disposed of three of the groups in a satisfactory manner, I could not find a man to whom I could entrust the group which was to represent 'The Dance.' I had thought of Carpeaux, and although I knew him to be a sculptor of great power and skill I knew also that he was known to be a thorn in the flesh of any architect. Eventually I sent for him, and on his arrival I carefully explained to him, as well as my drawing would allow, what was required. He went away, and returned a few days later with a sketch model of a group representing 'The Dance,' which was so uninteresting as to deserve critical comment from me. Carpeaux agreed with me, Then a new idea for the group occurred to me, and I endeavoured to show Carpeaux what had come into my mind; thereupon he took the pencil from my hand and said: 'This is how it should be done,' and he began to draw the figures in a manner of which I was incapable. Soon he returned with the new model, which was very beautiful. It was a group of a merry band dancing round a central figure. But it had too many figures on it. This

MR. GILBERT BAYES AT THE ARCHITECTURAL ASSOCIATION

was the greatest difficulty I had with Carpeaux throughout the execution of this piece; it was so difficult to restrain him from putting in figures. Each time I saw the group a new figure had appeared in it, and each time I took leave of the sculptor that figure had been taken out. His energy and imagination were amazing, but I dared not leave him for long alone with the group for fear of his putting in new figures." The original of Garnier's reminiscences makes much better reading than this, but it is too long to quote.

Eventually the group was finished and set up in the place, and strange to say, by reason of its abandon and merry sense of rhythm, it shocked Paris, who voted it indecent. There was a great deal of talk about the group, and at length it was actually decided to take it down, but the sudden outbreak of the Franco-Prussian war came just in time to save it. After the war the matter had been forgotten, and "La Danse" is there to this day.

Mr. Gilbert Bayes began his address at the Architectural Association by saying that he was not quite certain whether he was going to agree with the architect or not. At the Art Workers' Guild he knew what was expected. They expected a sculptor to do his own carving, and to carve straight into the stone without any preliminary models. They said that when the sculptor did his own carving there was more spirit in it. It more often happened, however, that the sculptor got so tired of the job that there was no spirit at all. Models were essential to show the architect or client what the sculptor intended to do.

The Sculptor's Opportunities

The two great influences which produced sculpture in England were architecture and exhibitions. The exhibition was a thoroughly artificial affair. It was detached from life, and called for something which had no practical value outside an exhibition. Rodin was a typical exhibition sculptor, and although he was a great man he was a dangerous man to follow.

The work of Mestrovic and Rosandic, on the other hand, was severer and more archaic in character, and more in keeping with the modern architecture of Germany and Austria. The influence of that modern German work was felt abroad.

It did not affect those in this country so readily, as they had a strong mediæval and classical tradition, although our classic was nothing but a classical trimming. They had forgotten to be a little human, and a little humorous. The grotesque had been ignored, and in their effort after lifelike representation they had got out of touch with the buildings. Once sculpture was sunk in symbolism, such as "Charity giving alms to Poverty, but restrained by Prudence," as Mr. Arthur Rackham had once put it.

Symbolism was virtually dead, and after all it should be the mission of art to appeal directly to the average man. Could they not have more colour in their architecture? And should they not weave their interests and life of to-day in their sculpture? Mr. Bayes said that when he was in Bruges he was taken to a building, and in the sculpture in it were to be found the clerk of works, the sculptor himself, and, above all, the architect in a fur collar. That building was interesting: it was human.

They had been tied too long to the stylists, and that had caused a violent reaction in some quarters, a return to so-called primitive forms, the forms of South Sea Islanders. It was an insult to the work of those cheerful savages. No, they could not seek a solution there. They must first understand the abstract laws underlying the art of sculpture. The modern stunt school knew nothing of those things; they produced things which were like nothing on earth, or the sea, or the waters under the earth, and for that reason their work was admired.

The Architect's Responsibility

Mr. Bayes concluded by saying that it was up to the architects to produce a more severe style of building, for good sculpture should be based upon good building. The future was in the hands of the architect. He hoped that they would not be appalled at the greatness of their fate, and he hoped also that they would use it wisely.

Mr. Francis Cooper, in moving the vote of thanks, advised the young men of the profession to be thoughtful of the sculptor. He spoke of the importance of the environment and the architectural setting of a piece of sculpture, and how a great piece of sculpture was often ruined by a wretched setting. He thought that "The Blind Postmaster," by Mr. Alfred Gilbert, in Westminster, was the most beautiful thing created in our day. It was in harmony with its mediæval setting, yet it was essentially something of our own time.

Mr. Gilbert Jenkins said that Mr. Arthur Rackham's clever remark about Charity giving alms to Poverty, but restrained by Prudence, had special meaning for them there. That was just the position of the client, the architect, and the sculptor. One could not get the chance of employing a sculptor, no matter how much one would like to. As to colour, it was difficult to treat the exterior of a building in colour in England; the farther south one went the more colour was a part of the lives of the people. Sculpture appeared to be going through a phase that architecture went through before the war; a phase of overstrained effort to produce something new at all costs. Sculpture would come out of it as architecture had come out of it. They had found that it was better to go on slowly building on their traditions, whether Gothic or Classic. Gothic had been fairly well tried out, and there was more a sense of trimmings in modern Gothic work than there was in the Classic.

Mr. Walter Gilbert quoted from a letter which he had lately received from Mr. Alfred Gilbert. It was a letter of great feeling, and high literary quality. It spoke of the great work of Robert Virtue in King Henry VII's Chapel at Westminster, and it discountenanced the idea that Torrigiano was responsible for the conception of the famous tomb.

Colour—not Columns

Mr. T. L. Dale said that it was unfortunate that although they knew that Corinthian columns were unnecessary, and that sculpture might be very necessary, the client liked to think that Corinthian columns were supporting building, and that sculpture was use because it did not appear to be d anything. No one was really interes in classic trimmings. Did they them any pleasure, those Corinth columns of theirs? There was a li scent shop in Bond Street, and there a great big shop in Piccadilly. scent shop was adorned with colour sculpture; the great shop in Piccadilly adorned with Corinthian columns. W gave them the greater pleasure? thought that they would confess— little coloured scent shop. It might that they would have to build great s cages in which to house thousands clerks, and with the watchwords Socialism, economy, and severity in air, they might make places fit for mach to live in. But, despite the theories Socialism, the clerk and the worker v not units of a machine. They were w and romantic, and they would not happy to work in surroundings devoi colour and ornament. As Mr. Bayes said, colour and humour made an ap long before abstract beauty was e subconsciously realized. As archit their ideas should tend towards a log solution of the structural problem, riched with sculpture and colour. idea that colour was not suitable in t northern climate was preposterous. C England was a mass of colour.

Mr. R. R. Goulsden said that it difficult to say what one meant by word "tradition." They were apt to c a number of superficial forms. Tradi had in many cases become mannerism

Mr. Manning Robertson remark apropos of the colour question, that l could be done in London, at least we had removed the smoke curse. T should do all that they could to get of the smoke trouble.

A Hint to the Carvers

Mr. W. G. Newton, who was in the c said that nowadays they had to con themselves with a good architect carver. In Greek and mediæval ti there was no great difference betw what was now called the sculptor and architectural carver. Mr. Newton that in watching the carvers at wor had often wished that they were dr They were too stiff, too proper, too chu wardenish. If they would only at their subject with fury and vigour!

In replying to the discussion, Gilbert Bayes referred to the questio the right setting. The setting shoul designed and thought out equally the sculptured creation. Watts's "J sical Energy," for instance, had no in its immediate surroundings to gi scale. More than half the fascina of the sculpture of Paris, for insta was that it was placed right. A colour, he said that the little Ban of the foundling hospital of Florence always bright, even on the dullest Mosaic was quite suitable to the ext treatment of buildings, as it coul easily washed. By way of conclusion Bayes gave a quotation from Koran; it was: "If you have two l and you cannot carry both, sell one buy flowers, for beauty is the spir life."

F. E.

Construction. 24—A New Type of Staircase

TO meet modern requirements a staircase must be durable, fire-resisting, spacious enough to accommodate maximum number of people in the ling during rush hours, and in case anic due to fire or accident of ient strength to carry the greatest that can be imposed upon it.

ne choice of materials for construction lly lies between real or artificial e, wood, or reinforced concrete for nal stairs, while for external a comtion of cast-iron treads, risers, and ngs, with steel framing and supports, ry widely employed. A new method aircase construction is shown in the mpanying illustrations.

r referring to Fig. 1 it will be seen the treads and risers are formed in piece out of steel plate bent to shape. sections are then riveted together as A.A," and connected to a steel string neans of angle cleats as at "B.B," into or otherwise attached to walls ne case may be. When these indial sections are riveted together they a series of trays or centering of great gth, and small studs or caulkings ." are provided to act as keys for the rial or filling destined for the tread earing surface proper. This filling be of granolithic, with a dusting of orundum to make it non-slipping, or any suitable substitute of a hard-wearing or non-slipping nature. The steel sections thus perform three functions, viz., firstly, as permanent centering; secondly, as structural support; and thirdly, as the tensile member of a beam with the material used for filling under compression.

If desired, the risers may be coated with the same material as the tread, as shown in Fig. 2, but in this case the top edge of each bent plate would be notched or serrated to act as a key for the nosing by allowing the filling of the tread to unite firmly with the riser covering. Again, if it is considered desirable, for the sake of appearance, or in order to protect the steel sections from atmospheric conditions, the underside of the stairs can be provided with expanded metal or other suitable lathing wired to the structure as indicated, which, when plastered, will form a soffit to the underside of the stairs. The same method is employed for the construction of winders and landings, each winder or landing being a tray of steel filled in with the composition selected and properly stiffened or supported to impart the necessary strength.

The manufacturers of this system of staircase construction claim several advantages to be gained by its use:—

1. Low cost of carriage by road, rail, or sea, owing to its lightness and freedom from risk of damage in transit.

2. Low cost of erection, because flights and landings, each in one piece, can be delivered to the site ready for hoisting into position and bolting or riveting together, thus avoiding the inevitable loss and waste of time involved when similar goods are delivered "piece small," as well as saving the expense of assembly on the site.

3. Time saved in erection, and the fact that they can be used immediately after fixing by laying in loose boards to prevent tripping over the top edge of the riser, or by filling in with a rough screeding. By this means an immensely strong and serviceable staircase is provided, which can be used during the progress of the contract, the treads and landings being finished off in the material selected, last of all, thus obviating risk of damage to the surface during the progress of the work.

4. The fire-resisting qualities of this method of construction are equal to any other existing method.

5. In its simplest form the cost compares favourably with any other type.

6. It is especially suitable for use for area stairs where there is a risk of heavy weights being dropped upon it.

7. It will carry safely very much

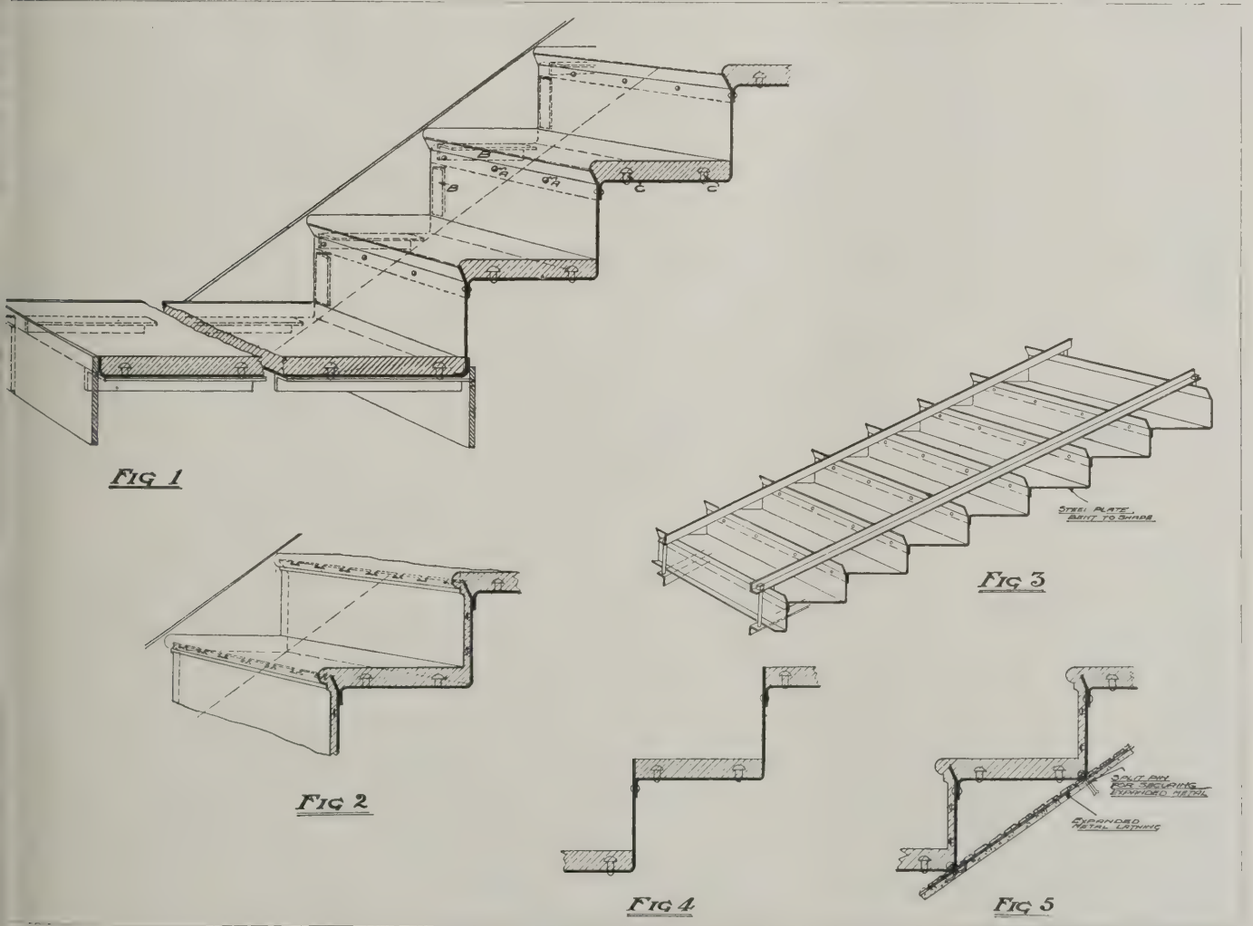


FIG 1

FIG 2

FIG 3

FIG 4

FIG 5

CONSTRUCTION OF LIGHT STEEL STAIRCASE.

greater loads than can be placed upon staircases in ordinary circumstances.

Where a staircase is to be fixed between walls, steel strings are unnecessary. In this case the sections could be delivered riveted together, braced by steel or wood booms bolted together, as shown on Fig. 3, and long enough to be built into the walls during the progress of the work. After being erected into position and built in, the braces or booms can be removed, and the stairs are ready for filling in.

Fig. 4 shows a typical section, and Fig. 5 the method of fixing metal lathing when a plastered soffit is required. In passing it may be noted that in many cases the flights and landings can be delivered with the metal lathing firmly wired in position, thus obviating labour on the site and expediting plasterer's work.

For external work it is obvious that although steel is more subject to corrosion than cast iron, the surface exposed to the weather is very considerably reduced, and the cost of maintenance, such as painting, etc., is affected proportionately.

For stairs up to 5 ft. in width and of the usual rise and going, it is proposed to employ steel plate $\frac{1}{8}$ in. in thickness. The modulus of the section for a 10 in. going and $7\frac{1}{2}$ in. rise in the gauge approximately 1.96 (or 7 per cent stronger than a 4 in. by $1\frac{3}{4}$ in. rolled steel joist). In a staircase 3 ft. 6 in. wide section, properly supported at the ends will carry safely a distributed load of approximately 2.8 tons, ignoring the additional effect of the filling, which would no doubt act as the compression member.

By increasing the thickness of the steel plate as required it will be seen that stairs of a much greater width can be constructed without incurring the necessity of providing intermediate carriages or supports.

The Lighting of Public Buildings

A JOINT meeting of the Illuminating Engineering Society and the R.I.B.A. has been held at the Royal Society of Arts, under the presidency of Sir Joseph Petavel, Director of the National Physical Laboratory. The main business of the meeting was to discuss the report of the Committee set up by the Illuminating Engineering Society to enquire into the best methods of lighting (natural and artificial) of public buildings.

To this end architects were asked to the meeting, for the Society were anxious to have the views of architects on matters which concern equally both professions. The general view of the report and of those who spoke was that semi-indirect lighting was the most advantageous, and although there was some slight loss in light power, the diffusion of the light, its softness and absence of glare, were of paramount need to the individual from the psychological point of view.

The experiments and the findings of the Committee with regard to the natural lighting of picture galleries are of peculiar interest to architects, for that subject should have been approached scientifically in Great Britain long ago. In America there is a wealth of information on these matters.

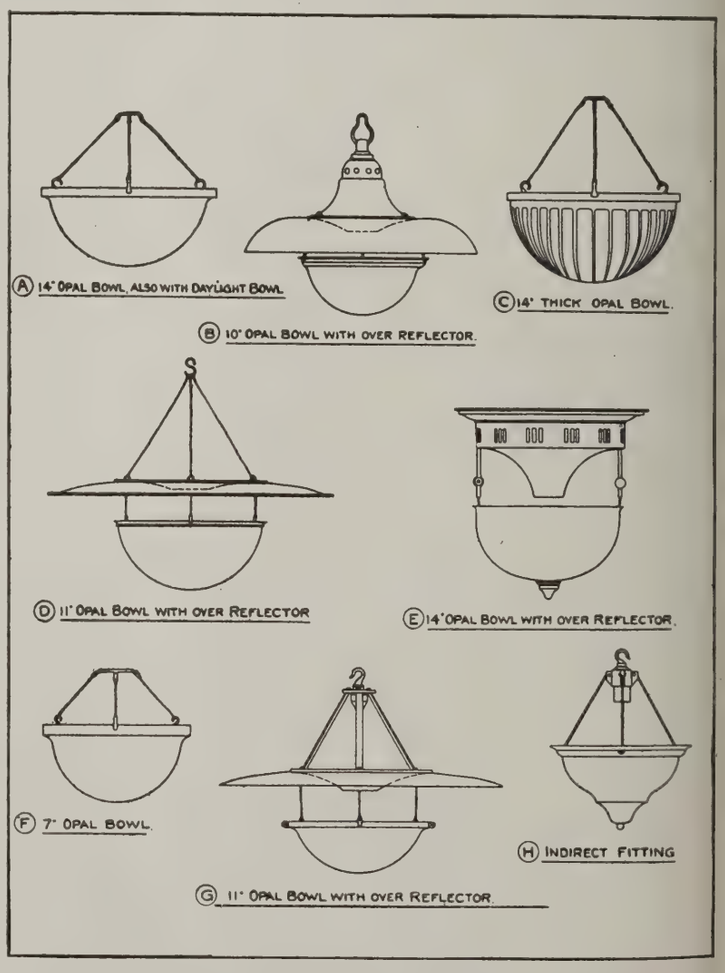
Sir Joseph Petavel, in his introductory remarks, spoke of the initiative of Sir Frank Baines in instituting lighting experiments. There were, he said, two things to consider in lighting. One was the mechanical efficiency of a system, and the other its human efficiency. The first was a matter of adequate illuminating power, costs, and the economical projection of light. The second was the effect of light on the efficiency of the individual.

Mr. H. Buckley, of the National Physical Laboratory, a member of the Committee which had made the researches, gave a short précis of the report, with some account of the experiments which had been carried out. Experiments had been made with a number of lighting systems and furniture in various places, and a shed, or rather a cage, of steel and glass had been built at Teddington which was available for experiments in lighting. This was of value to architects, for models of proposed conditions could be set up in this shed, and lighting effects could be noted.

A series of very interesting experiments in the lighting of picture galleries had been carried out in the grounds of the National Gallery itself. A model of a picture gallery, one-third full size, had been set up in the yard behind the National Gallery.

In the report it was stated that Sir Frank Baines, of the Office of Works, had referred to the laboratory a design of a roof which should diminish to a very considerable extent the trouble due to reflections from the glazing. The main idea was to reduce as far as practicable the general lighting on the floor of the gallery, so that spectators would be illuminated as little as possible; and yet to provide adequate illumination on the walls.

It was, of course, impossible to prevent reflection from pictures on the opposite wall; and, short of using a dark curtain along the length of the gallery, the best way to minimize the effect was to keep the picture frames and the wall decorations, especially those above the pictures, low in tone, preferably somewhat lower than the average tone of the pictures. The experiments which h



FITTINGS USED IN LIGHTING EXPERIMENTS AT ACTON.

n made indicated the great value of the
) resulting from the application of
principle of "monotony" in reducing
obtrusiveness of the inevitable reflec-
is occurring in galleries hung with
ures on both sides.
he experiments on lighting installa-
is for large clerical offices arose out of
request of H.M. Office of Works for
rmation which would assist them in
wing up a specification for lighting
allations at the new building of the
istry of Pensions at Acton. The par-
lar problem under investigation was
lighting of very large rooms which it
anticipated would be used for the
k of large numbers of clerical staff.
he semi-indirect, which was considered
oe the best method of lighting such
ns, was adopted in the experiments,
ch aimed at providing an initial
rage illumination over the whole
n of about 4 foot-candles.
was difficult to draw conclusions
a series of lighting installations
ss it was known definitely what were
precise conditions under which the
clusions had to be applied. A number
nstallations had been put up in the
erimental room, and measurements
llumination had been correlated with
power consumption.
s a result of considering installation
s, and the cost of current, renewals,
decorations, over a period of five
s, H.M. Office of Works were led to
adoption of a scheme of semi-indirect
in. opal bowls with 150-watt lamps
onjunction with the following decora-
scheme: Ceiling, white; 80 per cent.
ction ratio. Walls, light buff; 60 per
. reflection ratio. Frieze, white;
1. deep; 80 per cent. reflection ratio.
he rooms illuminated by this system
170 ft. long by 37 ft. 6 in. wide;
resulted in the use of twenty-six
. opal bowls containing 150-watt lamps
ed alternately two and one in each
The average initial illumination
4.15 foot-candles, while the maximum
minimum were 5.5 foot-candles and
foot-candles respectively.
r. Liberty showed some very interest-
lantern slides of buildings and rooms
uildings under artificial lighting. It
interesting to note how very clear
photographs were with a camera
sure of about ten minutes. He said
he liked the word lighting "furni-
" rather than lighting "fittings." The
"fittings" implied something that
essentially utilitarian and nothing
but the word "furniture" gave the
ng of a graceful and delightful ad-
t to a building. It was clear that a
ral increase of illumination was
ired in buildings, but with a decrease
are. The slides shown included the
rypt of the Guildhall and the hall of
Dyers' Company, but the most
esting were of rooms in two of Mr.
in Cooper's buildings—the Maryle-
Town Hall and the new Port of
lon building. In the case of the
er the slides showed how effective
ect lighting can be when the source
ght is reflection from the ceiling.
Dome Room in the Port of London
ing is a vast circular chamber, like
Pantheon at Rome, and like it, too,
coffered within. Mr. Liberty said
the domed ceiling was 190 ft. in
eter at its base—wider than the
of St. Paul's; it was unfinished as

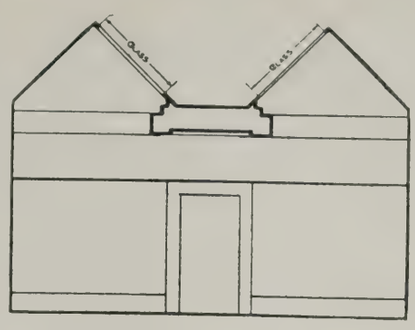


FIG 1 CROSS SECTION THROUGH MODEL WITHOUT SCREEN.

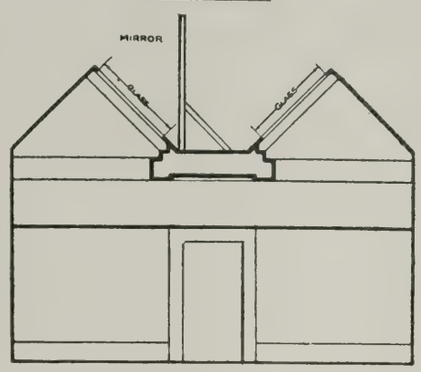


FIG 2 CROSS SECTION THROUGH EAST-WEST MODEL WITH SCREEN

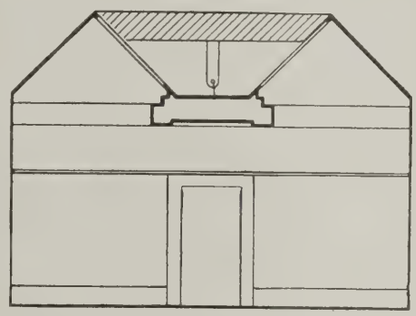


FIG 3 CROSS SECTION THROUGH NORTH-SOUTH MODEL WITH SCREENS.

A METHOD OF PICTURE GALLERY ILLUMINATION.

yet, and would be complete for the official opening of the building by the King in July. The lighting of that great room was something new in lighting; in England at least. It was lit from the top of the dome by seven lamps, each of 21,000 candle power. There was no other lighting in the room except a few table lamps, which were only necessary when, say, a few clerks might be working late and there was no need for the big general illumination. The question had been considered of putting some small lamps in places where architectural detail might be lost in the strong shadows set up by this method of lighting. Lighting to show up the architectural beauties of a building was a new but none the less important aspect of illumination. In that respect some photographs of the Capitol, Washington, under flood light were shown.

Mr. Lewellyn said they should have something in artificial lighting that was more akin to daylight. As an architect he had experienced the disappointment of finding some of the most delicate detail hidden in chunks of blackness. When an architect designed the interior of a building he should consider the artificial lighting, and design for night as well as day. The flood lighting of exteriors was a fascinating development; what a splendid thing it would be if they could flood-light St. Paul's!

Mr. Waldram said that illumination was not just lighting. One had to consider the effect of light on the eye of the individual. Shade and tint entered into the question considerably. He felt that the architect with his more delicate eye arrived at a satisfactory solution so much more easily than another did by calculation.

Major H. G. Gunton, of the General Post Office, said that the General Post Office had passed through all the stages of the science of illumination. Lately they had had to discuss the relative advantages of the direct and semi-indirect systems, and opinion was generally in favour of semi-indirect lighting. They had to consider whether a lighting was cheerful and pleasant to work in. Discussions of that sort were useful, for something good should come out of the collaboration between the architect and the engineer. All lighting schemes should make allowance for deterioration in apparatus and the loss of reflective power from white surfaces which had become dirty. All lighting schemes should be calculated on conditions which will exist between successive decorations.

Mr. Charles Baker said that he had no use at all for totally indirect lighting; semi-indirect lighting was much more useful. He had been endeavouring to get bowls which did not absorb more than six to ten per cent. of the total light power. He endorsed the last speaker's remarks as to the consideration of the value of a lighting scheme between decorations. As to the lighting of corridors, spoken of by Mr. Liberty, he would rather that corridors were not too well lighted. After a moderately lighted corridor, to come into a really well-lit room would be a greater pleasure.

Mr. Campbell said that in questions of the calculation of lighting it was granted that there was 20 per cent. to 33⅓ per cent. deficiency.

Mr. Hayden Harrison said that it was regrettable that the committee had not experimented with systems of direct lighting. Referring to the remark of Mr. Charles Baker, he had found it impossible to get a bowl which absorbed so low a percentage of light. A clear glass bowl, for instance, absorbed as much as five per cent. of the light. The open bowl required frequent cleaning, but the other half of the system, i.e., the ceiling, was a varying factor, and as such he did not favour semi-indirect lighting where the main reflection surfaces were subject to change.

Mr. Stroud hoped with Mr. Harrison that further tests would be taken on totally enclosed diffused direct lighting, where one had a unit which could be cleaned and renovated.

Mr. Ramsey gave some figures of the lighting of the Ministry of Pensions building at Acton; the interesting part of them was that whereas the total initial cost of installation per room was £83 6s. 2d., the running cost per annum was as much as £73.

F. E. T.

Correspondence

Summoning R.I.B.A. General Meetings

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. MacAlister is quite correct in his statement that the Council can call a special general meeting at any time, but there is only one way by which the ordinary members can requisition for one, see By-law 65. Ordinary members send in a requisition, and the Council calls the meeting. That the time for notice is short is not the fault of those who want the meeting, and in order that full notice can be received it was decided to write to you and state that the R.I.B.A. Defence League will requisition for a meeting in a few weeks' time to discuss a proposal to give Associates the same voting powers as Fellows.

At that meeting at least forty Fellows must be present. Associates can speak, but no Associate can vote, and a resolution will require a two-thirds majority to carry it, consequently Associates who are in favour of the proposal should appeal to their friends who are Fellows to attend in force and support their views.

SYDNEY PERKS.

Unification & Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Perks and his Defence League have been so busy endeavouring to misrepresent the intentions of the Institute Unification Committee that they have not found time to make clear their attitude towards the question of Registration by Statute.

All their arguments are directed to proving the impossibility of it, the failure of attempt to secure it, and its uselessness if it were obtained. We in the provinces are in real earnest about it, and we want to know whether or not those who have advocated it in the past, including Messrs. Cross, Searles-Wood, Hubbard, and Perks, have resolved to give up the effort to secure it as an unprofitable task, and indeed a hopeless one. Mr. Perks has stated that it will never be obtained, and he and others interpolate here and there in their speeches a remark to the effect that they favour Registration, or are not opposed to it, apparently when they feel they have gone too far in the other direction. If it is not taking up too much of your space, may I give quotations to show what I mean ?

February 7, Mr. A. W. S. Cross: "Our chances of obtaining statutory powers grow more remote each day." "The extremely remote and shadow-like chance that in the dim and distant future perhaps some paternal Government will kindly allow the Institute to manage the affairs of the whole architectural profession."

Mr. George Hubbard: "None of us are opposed to Registration." "We remain to-day exactly as we were then (in 1908), without the ghost of a chance of getting a Bill through Parliament. The only chance of getting statutory powers hereafter is if we can show it is in the public interest. Parliament has already protected the public . . . and Parliament does not care a straw about the taste or style of your architecture, and it will not give statutory powers on these lines. Still we are, I think, all in favour of Registration."

Mr. S. Perks: "The Parliamentary agent has written still more emphatically that we have no case, and that we shall not get Registration."

Others followed in the same strain, utterly illogical in combination with the principle of "Registration first, and then Unification."

Here, in the provinces, we regard Unification as a step to Registration, as a step that is well worth effort and some sacrifice, and unless the opponents of it can show us the way to secure Registration without this preliminary step, we have no use for their propaganda.

HERBERT T. BUCKLAND.

Registration and the Rights of Associates

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—May I ask for the use of a little space in order to refer to the letter on the above subject signed by the Officers of the Defence League, and to reassure the Associates of the Institute as to their power of voting on the proposals of the Unification Committee.

The letter has stated that "if the scheme of the Unification and Registration Committee were submitted to the full body of the Institute for approval no Associate would have the right to vote, and Fellows alone would decide it." This statement is altogether incorrect.

The matter before the meeting would be the proposals for a new Charter, and the Associates would have full power of voting on it. The By-laws would follow later, and they would have to come within the four walls of the new Charter: this Charter would almost certainly provide for Associates to have the power to vote on By-laws and thereby remove their only present disability.

The Associates held and exercised in 1907 the power of voting on the Charter, and they were exercising that power in 1914, when the war caused the Charter proposals to be suspended.

There is not the smallest need to put the Royal Institute to the expense of calling, and the members to the trouble of attending, a special general meeting, because the Council has already decided and has announced, long ago, the fact that any new Charter proposals that it may put forward will include the grant to the Associates of full power of voting on By-laws (see "R.I.B.A. Journal," 6 December, 1913). This principle was adopted at a general meeting which followed.

It is, perhaps, too much to expect that the Officers of the Defence League should remember these facts before they make unguarded statements to the press, but I cannot help feeling that those of them who were members of the Council at the time the action to which I refer was taken should verify their references before they spread needless alarm among the members of the Associate class.

ARTHUR KEEN,
Hon. Secretary, R.I.B.A.

New Inventions

Latest Patent Applications.

7903.—Bates, H. K.—Manufacture artificial stone copings, March 18.

7916.—Cowlishaw, F. S.—Refract basic bricks, etc. March 18.

7449.—Farrer, F. T.—Roof tili March 14.

7729.—Wonnacott, F. T.—Means laying mortar, pointing bri work, etc. March 16.

Specifications Published.

176027.—Gibson, T.—Concrete or l building construction.

176044.—Whittaker & Co., Ltd., C., a Whittaker, N.—Brick-mak machinery.

176054.—MacNaughton, J., and C rieve, W. T.—Roof constr tion.

176275.—McLean, D.—Construction walling of buildings.

Abstract Published.

174416.—Walls, building blocks.—J W. J. Lee, Yarrow Ro Chorley, Lancashire.—Buildi blocks having one face cor gated or curved are arranged form solid or cavity walls, thickest part of a block on outside of the wall being pla opposite to the thinnest part a block on the inside of wall. The blocks may be ranged so as to leave a conti ous vertical cavity or so t their thickest portions pa overlap, thus giving interrup cavities from course to cou or again, they may fit clos together to give an interlocl solid wall. Apertures and grooves may be provided accommodate reinforcing-r which may be tied together wires, or grouting may be c into the apertures. Inden tions or frogs for cement n be arranged at the upper a lower surfaces around the ap tures and end grooves.

The above particulars are specially prepared Messrs. Rayner & Co., Registered Patent Agents 5 Chancery Lane, London, from whom readers of Journal may obtain all information free relati patents, trade-marks, and designs. Messrs. Rayner & will obtain printed copies of the published specificat and forward on post free for the official price of 1/- e

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

The Sale of Municipal Houses.

Sir A. Mond, replying to a num of questions on housing matters, s that the position of ex-Service tena would receive the fullest protection connection with any proposals wh might be adopted for the sale of hou by local authorities. He did propose, in view of the large amount work in hand, to ask for any gen extension of the housing scheme. Th was, however, a small margin of 176,000 houses fixed last year in ha which he was using to sanction erection of further houses by lo authorities in special cases. Local aut rities had been requested by the Hea Ministry some time ago to prep schemes for the sale of houses. question of what further steps w desirable was engaging his attention.

..D.G. and Birmingham Civic Society Medals

few weeks ago we were able to unce that the Société des Architectes més par le Gouvernement had decided ace at the disposal of the Council of Architectural Association a grand l to be presented to the best student or woman) who has received the ma of the A.A. School. This medal, ich we publish an illustration below, typical example of French numis- art—notable as much for its appro- ness of design as for its delicacy of tion. We show with it a good ple of English work—the medal of Birmingham Civic Society, which, led annually to the "one who has most in adding to the amenities of ty," has just been presented to Mr. Jackson, founder and proprietor Repertory Theatre, Birmingham. Lord Mayor of Birmingham, in g the presentation, said that every e was sure, would heartily endorse ociety's recognition of Mr. Jackson's es. Eight years ago the Repertory re was built. Mr. Barry Jackson he builder, the promoter, and had ned all through the director of its es. His action, he believed, was ly disinterested, because all would that no great commercial success attend the presentation to the of the city of drama as a fine art. g its existence he had produced fferent plays and operas; many of were put upon the stage for the first time, and many were revivals after the lapse even of centuries. His lordship then handed to Mr. Jackson the medal as "a symbol of the recognition of your fellow-citizens for what you have attempted to do, and what you have succeeded in doing," and "some slight return by the people of this city for the great efforts you have made on behalf of dramatic art."

Mr. Barry Jackson, in reply, said that his work was an endeavour to try to give some dignity to our really great national drama, and arouse it to some intellectual worth. The effort was small, the theatre was tiny, but its effects were very, very far-reaching.

The medal, which is illustrated on this page, is of considerable interest, and was designed by Mr. Arthur Gaskin, chief of the Jewellers' School, Birmingham. On the obverse side is shown a mother and her child standing against an oak tree, signifying that Art is eternally reborn in its immemorial association with natural beauty. The dancing children upon the right represent the spontaneous sense of life and the impulse for its expression which are the soul of Art. The half-raised building on the left reminds us that Art has a direct bearing on practical life, and fulfils its true function not in mere ornament, but in transmuting to forms of beauty the common needs of humanity. With this ideal it both suggests and anticipates a happier future. On the reverse side of the medal is an eagle looking out from a rocky height upon a wide landscape, symbolizing the spiritual discernment of Art.

RMINGHAM CIVIC SOCIETY MEDAL (PRESENTED TO MR. BARRY JACKSON)

DAL PRESENTED TO THE ARCHITECTURAL ASSOCIATION BY THE S.A.D.G.

Competition News

Auckland Memorial Competition.

The following cablegrams have been exchanged between the Mayor of Auckland, New Zealand, and the R.I.B.A. :—

The Secretary Royal Institute of British Architects 9 Conduit Street W.

Memorial Museum Competition major axes Maori Hall and Maori Court must be parallel. In halls where span requires intermediate support desirable two such supports placed approximately quarter span from adjoining hall. In main entrance hall central hall central war memorial hall and hall memories supports left discretion competitors. For memorial trophies and memories halls lighting system left competitors. Posting first mail final memoranda and answers questions. Designs due Auckland thirtieth June but owing irregularity mails will allow fortnight extension advise competitors.

Gunson Mayor Auckland New Zealand.

Corrected conditions received London March eighteenth. Further answers expected middle April and middle May. Drawings must leave London twenty-sixth April to arrive Auckland June thirtieth. Time for completion obviously insufficient. Committee emphatically request date for despatch of designs from London be fixed June thirtieth. Please cable reply.

Ribazo London.

Agree your request extension June thirtieth London subject plans being shipped first mailboat thereafter.

Newport (Mon.) War Memorial Competition.

The R.I.B.A. Competitions Committee desire to call the attention of Members and Licentiates to the fact that the conditions of the above competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in the competiton.

List of Competitions Open

Date of Delivery.	Competition.
May 1	Business building, facing on an ordinary London street, in which "colour" (of a permanent nature) would be the dominant feature. Premiums £100, £50 and £20. Apply, Secretary R.I.B.A., 9 Conduit Street, W 1.
May 1	Cenotaph to be erected in Clarence Place, Newport. Apply with deposit of £2 2s. to Mr. Albert A. Newman, Town Clerk Town Hall, Newport, Mon.
June 12–17	Owen Jones and Mulready Prizes for students for Architectural decoration, woodwork and cabinet work, textiles. Apply Secretary, The Royal Society of Arts, John Street, W.C.2.
June 17	War Memorial to be erected in Christ Church Park, Ipswich. Apply Joint Honorary Secretary, Mr. G. M. B. Langdon, at 12 Tavern-Street, Ipswich. Assessor, Mr. Henry V. Ashley, F.R.I.B.A.
June 30	Museum and Institute as war memorial for City of Auckland, New Zealand. Cost £170,000. Premiums amount to £1,000. Apply Secretary, R.I.B.A.

Through the courtesy of a New Zealand architect, now in London, three photographs showing different aspects of the site of the Auckland War Memorial have been lent to the R.I.B.A. They are exhibited in the R.I.B.A. Library for the benefit of competitors.

The Week's News

New Lambeth Project.

Lambeth proposes to build a cleansing station at Kennington costing £2,850.

New Dry Dock at Swansea.

Under the Government unemployment scheme the building of a dry dock is shortly to begin at Swansea.

Darlington Improvements.

Darlington Corporation propose to borrow £30,000 for the purposes of sewage disposal.

St. Paul's Bridge.

The Government are being urged to press forward the building of the proposed St. Paul's Bridge as a means of providing employment for the unemployed.

Architectural Practice.

Mr. S. Gordon Jeeves, M.S.A., architect, has moved to 4 George Street, Hanover Square, W.1 (telephone: Mayfair 5233), his partnership with Mr. A. E. Bullock having been dissolved.

A.A. New Members.

The following new members have been elected by the Architectural Association: A. L. Knott, Austin Blomfield, Sidney Simpson, L. E. C. Simpson, G. S. Harrison, A. E. V. Tutte, H. T. Finchett-Maddock, and David Kelly.

Folkestone Outfall Sewer.

The Corporation are applying to the Ministry of Health for sanction to a loan of £46,000 for the extension of the outfall sewer to Copt Point and across Copt Rocks. The engineers are Messrs. W. H. Radford and Son, of Nottingham.

Fire at Famous Shrine.

At Montreal the Basilica of St. Anne de Beaupré has been totally destroyed by fire. The Basilica, opened in 1876, was completed in 1889. The "miracle working" statue of St. Anne, with the relics, to which also miracles are attributed, has been saved.

Architects' Change of Address.

Messrs. Herbert O. Ellis and Clarke, FF.S.Arc., architects and surveyors, have taken new offices at No. 5 Old Queen Street, Westminster, S.W.1. Telegraphic address "Entasis," London; telephone number Victoria 4328.

Northampton Polytechnic.

Mr. Angus R. Walbrook, director of Messrs. Champion, Druce & Co., will deliver a lecture on "True Paint Economy," at the Northern Polytechnic, Holloway to-day at 7.45 p.m. Members of the public interested are admitted upon presentation of visiting card.

Institute of Scottish Architects.

The Council of the Institute of Scottish Architects have held a meeting in Edinburgh under the chairmanship of Mr. A. G. Heiton, Vice-President. A new code is being compiled, and it was decided to continue the gathering of information regarding existing by-laws. One Fellow, three Associates, and twenty-five Students were elected to membership. The members of the Council for the ensuing year were fixed at one president, one past president, five vice-presidents, fourteen chapter representatives, and three Institute representatives.

The Concrete Institute Masonic Lodge.

Some members of the Concrete Institute have decided to present a petition to Grand Lodge for the founding of a Concrete Institute Lodge. Members interested should communicate with Capt. M. G. Kiddy at 269 Vauxhall Bridge Road, S.W.1.

Early English Church Destroyed.

A serious fire has occurred at the Early English church at Petham, about four miles from Canterbury. The firemen cut through the roof, and by that means saved the chancel from destruction, but the remainder of the building was practically destroyed. The church consisted of a nave, south aisle, chancel, north porch, and a south-west tower.

Welshpool £2,000 Recreation Scheme.

On behalf of the Welshpool Recreation Association, Major David Davies, M.P., has purchased several acres of land on the outskirts of the town for £1,300, and the ground is to be let to the Association. It is proposed that there should be a children's playground, a hockey ground, six tennis courts, a bowling green, and pitches for cricket net practice. Including a pavilion and tea and dressing room, the estimated cost of the lay-out is £800.

Gift for Royal Society of Arts.

An anonymous donor has given £30,000 towards the £50,000 which the Royal Society of Arts require for its headquarters in Adelphi-Street, Strand, W.C. About 150 years ago the Society entered into a contract with the brothers Adam to build the premises, but they have been in the position of tenants. When the landlord decided to sell the freehold a little while ago the Society appealed for funds, and about £42,000 has been received.

Bartlett School of Architecture.

Two open entrance exhibitions, tenable at the Bartlett School of Architecture, of the value of £40 a year, may be awarded in June 1922. Candidates for the first exhibition must have passed the matriculation examination of the London University or some other examination accepted in its stead. Candidates for the second exhibition must be graduates of a British university or some other university approved by the selecting committee. The exhibitions may be tenable for five years, subject to satisfactory progress. Full particulars may be obtained from the secretary, University College, London, W.C.1.

Registration in South Africa.

At the annual meeting of the Natal Institute of Architects held at Durban, the following resolution was passed: "That, in view of the opinion expressed by the Minister concerned, we recommend to the several Provinces here represe that a Union Bill be proceeded with, that the Draft Proposed Architects 1913, prepared by the Associatio Transvaal Architects, be accepted as basis of discussion for the new B The object of the Bill is to protect public against the unqualified man, a safeguard the interests of the tra architect. It should also prove a g help in the raising of the standar architecture.

The Channel Tunnel.

An effort is to be made to bring head the question of the constructio the Channel Tunnel, and in May a re sentative body of Frenchmen in sup of the scheme is expected in Lon The present estimate of the cost is th millions. The project would give e ployment to thousands of unemplo as men would be required to erect ne sary buildings in Kent, and for the struction of "roads of approach" Dover. Two electrified railways wo according to the plans, be laid betw London and Dover and a new statio London; and power-stations, with a bridge at Charing Cross, might come existence.

The Architectural Review.

The April issue of "The Architect Review" is distinguished by its reproductions of the mural dec tions at Christ's Hospital, Hors (the "Blue Coat School"), by Fr Brangwyn, R.A. Six plates of the pa are given, and two of the artist's sti for the panels are reproduced in co The opinion of many, and inciden of the artist himself, is that these m decorations are the best work he has done, and certainly form one of the important of recent contributions t art. "Here there has been a pe understanding between artist and a tect. . . . The result of the bined work of the designers of the ch and its decorator is an interior in w there is no discordant note. . . . this is a harmony so rarely achieved to meet it in a modern building is freshing delight."

Housing Conference at Chester.

At a conference of local authoriti Cheshire, Flintshire, and Denbighsh held in Chester, under the auspice the National Housing and Town Plan Council, the following resolution passed: (a) That the conference p on record its agreement as to the n sity for reducing the cost of buildin all possible means, and (b) calls upo Government steadfastly to carry effect the policy embodied in Sec 1 and 7 of the Housing and Town P ning Act of 1919. The conference, by lution, also urged the Ministry of H to give the same facilities for carr out schemes in the rural areas as being given in the case of scheme urban areas, and to extend until 192 period during which the housing sub for new houses would be given to authorities, thus placing England Wales on the same terms as the kingdom of Scotland.

nesday, April 12, 1922. Vol. LV. No. 1423

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

THE REFORM CLUB, PALL MALL. SIR CHARLES BARRY, ARCHITECT.

27-29 Tothill Street, Westminster, S.W.1.

The Reform Club, Pall Mall: Main Entrance

Sir Charles Barry, Architect

Barry won the competition for the design of the Reform Club from Blore, Basevi, Decimus Burton, and C. R. Cockerell. To beat such it was necessary that his design should be a masterpiece; and it is. He had more difficulty with the doorway than with almost any other of the building. He was urged to design porches and columns, but he realized that this would destroy the synthesis of the building finally hit upon the door and window treatment shown above, which is magnificently successful.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

dnesday, April 12, 1922 Volume LV. No. 1423

›me Joyous Aspects of the Building Exhibition

YESTERDAY saw the formal opening of the latest of the long series of International Building Trades Exhibitions; Mr. Paul Waterhouse performing the ceremony with all the native grace and courtly ity befitting so important an occasion, and eminently ›er in a President of the R.I.B.A. For many provin- members of the Institute, this will have been their opportunity of seeing the President in the flesh. Some have enjoyed the good fortune of getting speech with ; and to-day his good right hand is probably feeling ›ainful as that of a President of the United States is ited to be the day after a reception at the White House; in both cases it is consoling that the suffering is endured good cause—the cause of amenity and good-fellowship. world was never more in need of every manifestation hat spirit.

hat the Building Trades Exhibition does so much to note fraternity is not the least valuable of its many nable advantages. Every year the exhibition becomes easingly a social occasion; promoting prodigiously not ness merely, but the friendly and consenting spirit that sential to business success; for this kind of success is ly based on mutual faith and understanding, on agree- t, friendliness, and genial sociability.

rather high and thorny hedge has grown up between us units of the great building industry—between the itect and the builder, and between both and the builders' hant or trader; between the provincial architect and Londoner; between the members of societies that too 1 are quaintly considered to be rivals, although ously they are working in much the same way to secure tical objects, and are thereby proving incidentally unanimity and unity may be quite different things.

is quite clear, then, that the Building Trades Exhibi- is rendering a very valuable service to the building stry in drawing its component units closer together; so to speak, tuning them up to concert pitch. This, ıy be urged, it does only casually and temporarily, and nsiderable intervals; but who will have the hardihood terpret its effects by pretending to assess them by fanciful misapplication of the Einstein theory of the action of time and space?

e are on more solemn ground in assuming that exhibi- of any kind set a striking example of the powerful ts of co-operation as well as of competition. But there marked distinction between mode n business and strial exhibitions and their prototypes the Eastern ars and the colossal fairs like those of Nizhni-Novgorod Leipzig, which are scenes of higgling and barter. The ling Trades Exhibition, for example, greatly refines ıe crude methods prevalent at such primitive institu- . At Olympia there are business arrangements in y, but there is no huckstering. Orders are busily booked; but any approach to "pushfulness" on the one hand, or to "cheapening" on the other, is not to be seen there. Naturally enough, every exhibitor is alert to expound the merits of the particular commodity that his stand has been erected to display; but usually he adopts the bland methods of the expositor, sedulously avoiding any tendency to the blatant puffery that made more or less futile the self-defeating efforts of the pre-scientific school of salesmanship, which did not include psychology in its curriculum.

It follows that stallholders, proficient in the gentle art of modern scientific salesmanship, are in effect so many technical educators, and that, therefore, multiplying them as it does, the Building Trades Exhibition is an institution of direct educational value on the practical side. Then, seasoning practice with a modicum of theory, there are the popular architectural lectures presented by the Welcome Club. Mr. Herbert Cox will discourse popularly on "Old St. Paul's and Other Cathedrals"; Mr. Nathaniel Lloyd has promised to talk familiarly on "The Englishman's House"; Professor Patrick Abercrombie will explain "What we Mean by Town Planning"; and Sir Lawrence Weaver is secure of a large audience for his lecture on fashion and style in "Modern Domestic Architecture." It is not necessary to give here a full programme of the lectures; these few examples will suffice to show how truly educational the Building Trades Exhibition is becoming. It is, of course, educational, fundamentally and essentially, by its comprehensive illustration, on its stalls, of all the details of all departments of the vast and complex business of building. It marks progress; and from the various stalls the investigator may obtain all the information he requires about novelties and improvements in its multitudinous materials, devices, and processes; thus keeping fully abreast of the times everybody interested (and who is not?) in every phase of the art of architecture and the science of building—architect and builder, client and householder, may here inspect the latest developments in the earliest of the industries.

And while the exhibition is an unrivalled means of making us better acquainted with stocks and stones and many inventions, it is no less serviceable in promoting social intercourse. It is a rallying-point where all architects may forgather and fraternize if they choose; and the Welcome Club invites them to take their friends with them—a concession as useful as it is ingratiating, since it may be a valuable advantage to the architect to be able to discuss professional matters there with his client in a favourable mood and in a conciliatory environment.

Certainly, the Welcome Club is a great and growing idea. Is it not a portent of unity? Three separate organizations—the R.I.B.A., the Society of Architects, and the Architectural Association—have combined to make it the distin-

guished success it is. Surely that combination is an excellent augury, a foretaste, of the larger, more complete, and altogether more effectual Unity that is for the moment the most ardent hope of the Profession. Welcome Club functions will this year reach their meridian or grand climacteric when, on April 21, Mr. Paul Waterhouse takes the chair at a banquet at which representatives of Government departments, and other "persons of quality" will dignify the feast

On the night of this high festival there is to be a fancy. dress ball and carnival in the Conference Hall, which will be specially decorated for the occasion. It would appear that, in the interests of the Architectural Association Endowment Fund (*prosit!*), exuberant youth (A.A. members all) intend "to make a night of it," and there is to be a carnival procession through Olympia to exhibit, incidentally, some "Brighter Building stunts"; wherein, it may be confidently anticipated, Gaiety will wait on Humour, Art on Wit. It will be a truly joyous interlude in this World's Fair of the Building Industry; and in supplying "all the fun of the fair" the A.A. students are really following a very old, but never stale, tradition. Their addition of this touch of fun and frolic adds the piquant sauce to a sufficiently diversified and very delectable dish.

Bolingbroke House, Battersea

The threatened demolition of Bolingbroke House, Battersea, is most regrettable, and we hope that the owners may yet be prevailed upon to spare the building. What exists to-day is the remnant of a Jacobean mansion that was partly demolished in 1780 to make room for flour-mills. Walter St. John, grandfather of the first Viscount Bolingbroke, inherited it in 1630. Bolingbroke, driven out of politics, took to literature, and made Bolingbroke House a sort of literary *salon*, where Swift, Pope, and Lord Chesterfield of the Letters were frequent visitors. It is stated by a writer in "The Times" that the interior, fragmentary as it is, contains some 3,000 feet of William and Mary panelling, which wealthy Americans covet. There is also a covetable old staircase. The three Jacobean strap-pattern ceilings, if they can be got down whole, may also cross the Atlantic; a fate that is hardly likely to be escaped by the famous diamond-panelled Cedar Room, which contains also a Louis XIV fireplace which Bolingbroke is thought to have brought from France. It was in this room that Pope wrote his "Essay on Man." Not only Battersea, but Britain will be the poorer in æsthetic possessions if this fine woodwork and plasterwork are allowed to leave the country. There ought to be a stringent law to prevent such sacrilege.

The Fatal Window

What is the most dangerous occupation? A writer in the "Manchester City News" has no doubt that window-cleaning is the most deadly of all industries. Statistics prove, he says, that accidents to window-cleaners are twice as numerous as those that happen to coal-miners, and by implication he holds the architect responsible. "We have only to look," he says, "at the modern houses of the garden-city type to realize that many are veritable death-traps. There are no window sills for foot-rests, and the projecting bays make it almost impossible to reach the windows, which can only be cleaned from the outside, as they only open outwards. It is the same," he continues, "with large warehouses that were built a few years before the war." One might almost suppose that the writer had intended to say, "before the Flood"; but he goes on to suggest that to avoid further bad planning of this sort there should be a conference between the chief architectural societies and the Window Cleaners' Company. To what purpose? Is it insinuated that architects need convincing of the danger of cleaning windows from the outside? All architects qualified to use that description are fully aware of the danger, and are very careful to provide against it by availing themselves of one or another of the numberless devices that enable the cleaning of windows from the inside.

"Housing Betrayal"

Unfortunately many persons read very little beyond headings in their newspapers. As these headings are o misleading, it is certain that they have spread very un impressions about the building industry. In particu they have constantly fostered the notion that it was wicked "building rings" that sent up the cost of hous whereas the actual culprits were, as builders have alw said, the vendors of hardware supplies such as gaspi stackpipes, and eaves gutters, to say nothing of tenpe nails. Some headings to an article printed in "The D News" one day last week are apt to be similarly mis strued by the newspaper reader who shirks the troubl reading the matter beneath the headings. Such capti in large type, as "Housing Betrayal," "Broken Ri "Cheaper Houses Owing to Trust Collapse," convey to average newspaper reader (who is never very keen to i criminate) the quite gratuitous impression that the bui is implicated in this turpitude, and that the archi backs him up in these sinister practices. (The sensati expression "Housing Betrayal" seems to refer to bro political promises rather than broken "rings.") The p fact is that the architect and the builder have only too r reason to deplore (since nobody has suffered through t more severely than they) the extortionate charges were imposed on them by the real ringleaders—the wh salers who, for instance, are alleged to have been char £50 per ton for tubes that Canadian firms were selling £8 per ton. But our contemporary reports that t injurious rings are all breaking up, and no longer in the cost of building.

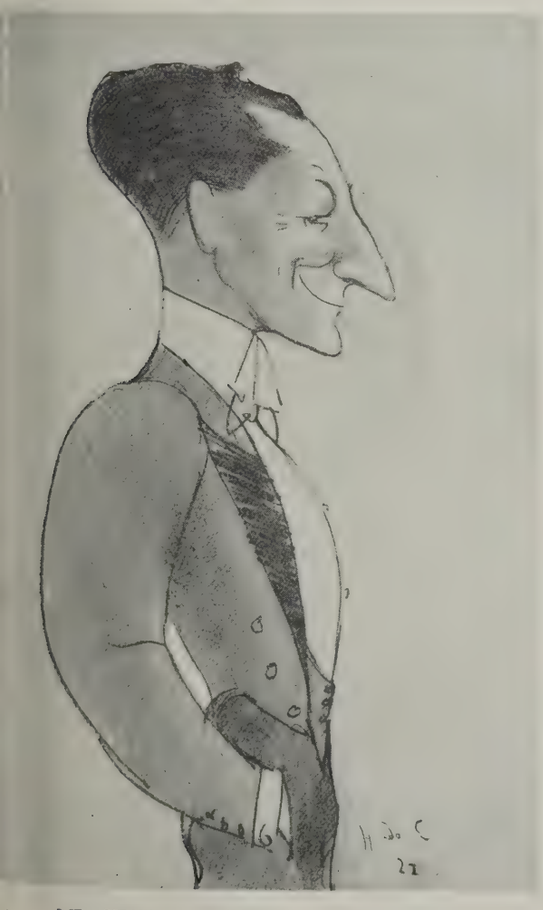
The £400 House

A paragraph in a recent "Daily Graphic" b this fascinating heading. It is based on some observat by Sir Kingsley Wood, M.P., who said: "Tenders Government houses for under £400 are being receive the Health Ministry; they are expected to be still lo and the time when house-building will be an economic position for the private builder is in sight." He ad "Since it had been made clear that the Government not in the market for an unlimited number of houses, cost per house had been reduced by one-half. The lo tender received by the Ministry came in this week. It a tender of £388 for a house with three bedrooms, par and kitchen." As a house of this type could not, at pre prices, be built for much less than £300, it is difficult to as sanguine as Sir Kingsley about a prospective fur drop on the already low tender he cites. Nor must i assumed that his forecast holds good with respect to d ings of a superior class. Building with which there no direct Government interference has never experie an inflation exactly proportionate to that of the State-a dwelling. Certainly there was a "sympathetic rise," it never reached the extravagant heights to which working-class dwelling soared when the Government bidding high "for an unlimited number of houses." sequently the cost of the "middle-class dwelling," and cost of building generally, is not at all likely to fall as cipitately as the now deflated cost of the subsidized dwel Sir Kingsley's observations as to cost should be str limited to the class of building to which he intended t solely to apply; more especially since if, as he anticip house-building is about to become "an economic pro tion," labour and materials will be increasingly absorbe that particular phase of the industry, and there may sequently ensue an upward rebound. Sir Kingsl speech is one of the many current symptoms of an appr ing "building boom," and since it is in the nature "boom" to raise prices, the wise client will put his wo hand without further delay, more especially since it ca be foreseen what effect the engineering lock-out may in the depletion of steelwork stocks. For a few weeks effect will be negligible. Afterwards, if the lock-ou greatly prolonged, it may become serious.

Mr. Stanley C. Ramsey, F.R.I.B.A., on "London Clubs"

WHAT more attractive subject could be found than this, of London Clubs? And Mr. Ramsey's treatment of it at the R.I.B.A. was so admirable and so concise that in less than an hour had passed through our London streets from St. es's Street to Piccadilly, from Trafalgar Square to Mall, admiring, comparing, and criticizing these ures in our midst. If Genoa is a city of palaces, then lon is a city of clubs. There is nothing that is so essen- and peculiarly British as the club; and there is nothing h so epitomizes the civic aspect of London as these and very exclusive buildings.

ie club as a British institution is that happy blend of isiveness and communality—but not too much com- ality. We have carried these characteristics abroad us to the ends of the earth. In Calcutta there are y more clubs than churches. The Bengal Club on vringhee gives that fine wide street the dignity of a dilly. Cape Town has a very good club, and the chief of Durban is one of the most magnificent buildings of ind; one side of it, that overlooking the inland waters e harbour, is such a fine array of columns, terraces, and that one wonders how they got so much stone so designed and wrought into such a place. The Union at Port Said is an oasis of British refinement in the cosmopolitan of ports.



MR. STANLEY RAMSEY AT THE R.I.B.A.

There are few finer streets in this world than Pall Mall; and in the number and contiguity of its architectural works it may well be compared with the Via Garibaldi of Genoa. The palaces of Genoa are expressive of one people of one time, but along Pall Mall is written the whole history of architecture from Early Greece to the late French Renaissance. It is in the interiors where we excel, for almost all of them are beautiful, and lying within an Italian Palazzo one will always find the very solid heart of England.

Mr. Ramsey, in the course of his paper, said: The clubs of London, considered as a group of buildings, are amongst our most cherished possessions. We speak of them collectively, as we speak of the "City Churches" or the "London Squares," as something peculiar to and inseparable from London life.

Mr. Ralph Nevill, to whom I am indebted for much of my information on this subject, in his book on London Clubs, tells us that "the modern club, with its luxuries and comforts, has its origin in the tavern and coffee-house of a long-past age." 'He mentions the "Mermaid," which is supposed to have been the meeting-place of Shakespeare and Ben Johnson, as one of the earliest of London's clubs. But it was the coffee and chocolate houses of the seventeenth and eighteenth centuries which formed the nucleus of so many of our famous clubs. The proprietors found that as time went on it paid them to exclude the general public and to run these houses for the benefit of their regular *habitués*, who themselves decided by election who were and who were not to be allowed to join them. Afterwards committees took the management of the clubs out of the hands of the proprietors, and ran them for the benefit of the members. Thus we find the name of the original proprietor or the name of the coffee-house is to-day the name of the club, such as Arthur's, White's, Brooks's and Boodle's.

These earlier social clubs are to be found in St. James's Street, a street conveniently adjacent to St. James's Palace, and famous in the annals of the eighteenth century. Pall Mall is the chosen neighbourhood of the literary, political, and service clubs of the early and middle nineteenth century; whilst the later social clubs are to be found for the most part in Piccadilly. There are, of course, other clubs dotted all over London, but this is Clubland proper.

Many of the club buildings have undergone strange and, in some cases, sad experiences, whilst, happily, many others remain practically as they were built. The buildings themselves are not all of equal architectural importance, some very famous clubs being represented by very unworthy architecture, and others, though perhaps having an interesting façade, have been spoilt internally by thoughtless renovations and alterations. Again, the interiors may have survived practically unchanged, whilst it is the exteriors that have suffered by subsequent so-called "improvements." For my purpose this evening I have therefore had to make a selection; and if I pass over anything that merits notice, I must crave your pardon.

Brooks's Club, on the west side of St. James's Street, is one of those famous centres around which the brilliant social life of the latter half of the eighteenth century revolved. The club was founded in 1764, and its original headquarters would appear to have been somewhere in the neighbourhood of the Marlborough Club in Pall Mall. The original founder was Almack, but in 1774 Brooks became the master of the establishment, and in 1778 he built the present premises.

There seems to be some doubt as to who was the architect

of the building. The land was conveyed to Mr. Brooks from Henry Holland, who has been credited with the design, though competent critics have ascribed the work to James Wyatt. There is a solidity about the early part of the club building, together with a handling of the detail, which is somewhat after the manner of some of the old houses in Hans Crescent and Chelsea, which, if Holland were the architect for these, would go far to establish him as the designer of Brooks's. The elevations have suffered from subsequent alterations, and the original character has been somewhat lost.

The interior has had a much happier fate, so that much of its original charm remains. The large smoking-room on the first floor (the "Great Subscription Room") is a magnificent apartment. It has a splendid barrelled ceiling, and the ornament throughout is beautifully detailed and executed. The ceiling is divided into rectangular-shaped panels by flat bands of delicately moulded guilloche ornaments, accentuated by the gilding, which is put on solid—the correct method of gilding for this class of work. From the centre of the ceiling hangs a graceful candelabrum of gilt-metal and glass lustres, originally used for candles, but now adapted for electric light. The period of gas, with the accompanying mid-Victorian fittings of unhallowed association, was passed over in disdainful neglect, and before the introduction of the present method of illumination nothing later than candles or lamps was used; and the club is to be congratualted on its escape from the artistic horrors of the gaselier.

One of the most famous of the eighteenth-century clubs in St. James's Street is White's; but, although important socially and historically, it has but little architectural interest.

Boodle's Club in on the same side of St. James's Street as White's, and almost opposite Brooks's. Of all the eighteenth-century clubs that remain to us, this is the most complete both externally and internally. If we cannot properly describe Boodle's as the work of the Adam Brothers we can quite safely say that it belongs to the Adam School. The interior has been almost as little altered as the exterior. Between 1821 and 1824 certain alterations were made by John Papworth, and probably it was he who added the rather uninteresting coffee-room at the rear. The finest room in the building is the large saloon on the first floor. This chamber, and the two small saucer-domed apartments opening out of it, are arranged *en suite*. The ceiling of the saloon, which was originally painted, has now been covered with plain whitewash, to the undoubted detriment of the room; fine as it is now, it must have been still more impressive before the paintings which adorned the ceiling were removed. The face of the pilasters is treated with a fine arabesque, and the capitals, with their rich cluster of delicately modelled leaves, are good examples of typical "Adam" work. The doors are divided into panels enriched with a small guilloche ornament, which is both effec and original. The door opposite the large Venetian win is a particularly beautiful example, with its well-pro tioned entablature and ram's-head pilasters. The pa immediately below the cornice of the saloon are mode in low relief, and the only remaining expression of painter whose work originally embellished the apartm is seen in the painted panel over the fireplace.

THE CHAIRMEN OF THE TRAVELLERS' (LEFT) AND ATHENÆUM ARGUE ABOUT THE EXTERMINATION OF RATS.

Of all the clubs in Piccadilly my favourite, architectura is the St. James's. Coventry House, No. 106 Piccad was originally built by Sir Hugh Hunlock, whose init H.H. may be seen on a fine old lead cistern bearing date 1761, which still exists in the front area; but, un tunately for Sir Hugh, he appears to have built with counting the cost, and in 1764, when the house was unfinished, he was compelled by the force of circumsta to sell to the sixth Earl of Coventry, who purchased it 10,000 guineas, with an annual ground rent of £75. Rol Adam was employed on the finishing and decorating of interior.

Who was actually responsible for the original desig the building I have been unable to discover. Cer features seem to indicate Sir William Chambers as author. Whoever's work it was, the principal fron one of the most dignified and noteworthy façades in Pi dilly, and can more than hold its own when compared v more important and better-known buildings.

Robert Adam has been referred to in connection with design of certain parts of the interior. He first comes the scene early in 1765. The ceiling of the front room the first floor (now the coffee-room) of the club is an inter ing example of Adam's earlier manner. Adjacent i small octagonal room which was originally Lady Covent boudoir. Adam was particularly fond of these sm octagonal rooms, and the work here is equal to anyth he ever did.

Though built originally as a private house, the build is singularly well adapted for the purpose of a social such as the St. James's, and it is happy in having esca spoliation at the hands of the modern decorator, wh misdirected efforts have resulted in the partial or comp ruin of many similar buildings.

I am now going to take you to another part of Lon to visit the Union Club—a link between the clubs of James's Street and those of Pall Mall. The present h of the club, forming, with the College of Physicians, a c plete block of buildings on the west side of Trafalgar Squ was built from designs by Sir Robert Smirke, R.A., in 1

The design of the interior of the building is in s respects not equal to that of the exterior, particularly the treatment of some of the detail. The morning ro with its spacious bow-window overlooking Cockspur Str is the glory of the club. The room is divided into th bays with scagliola columns, based on the order from Tower of the Winds at Athens, though not nearly so executed as the similar columns in the hall of the Athena Club. There are two chimneypieces, one in each of end bays. The design of these, however, is not very g it would seem that Smirke had intended to be a little pla in their design, but the result is not far removed from grotesque.

Sir Robert Smirke and his brother Sydney were responsible for the Oxford and Cambridge Club in Pall M which was built in 1836–37. It is interesting to note many of these Pall Mall clubs were built within a few y of one another. Nash seems to have started with United Service Club in 1828; the Athenæum, by Deci Burton, followed in 1830; then the Travellers', by Barry 1832; the Reform in 1837–38; and the Carlton in 1 Comparing these Pall Mall clubs with the clubs of St. Jam Street, we are at once struck with the more serious as of these later buildings. The Georgian tradition was d and the nineteenth century was in full swing.

The Oxford and Cambridge Club has an imposing fr towards Pall Mall, but the architecture lacks the pu of the earlier Union Club.

The Travellers' Club, built in 1832, was one of Barry's earliest commissions. The façade shown above is remarkable for the originality of its composition. In the treatment of the first-floor windows Barry has broken away from the severely rectangular forms which prevail throughout the rest of the design, and has finished them with semi-circular heads enriched with a shell ornament.

The St. James's Club, Piccadilly

This building, first known as Coventry House, was begun in 1761. The name of the architect is unknown, though the work has been variously ascribed to William Kent, Matthew Brettingham, and Sir William Chambers. It is known, however, that Robert Adam was employed on the finishing and decorating of the interior. The principal front is one of the most graceful and dignified façades in Piccadilly.

E

lt by Nash in 1828, the United Service Club remained altered and embellished by Decimus Burton in 1858, ceeding which, judging from drawings that exist of riginal fabric, must have robbed it of much of its ial charm. Fortunately, Decimus Burton's efforts at Inited Service Club were chiefly confined to the or; the interior retains more of the true spirit of

present premises in Pall Mall were commenced in and completed by midsummer 1829.

he mass the building is still a fine and striking struc- and though there is something to regret, there is still the outside of the building that in any way represents Greek architecture.

A noteworthy feature of the exterior is the balcony dividing the two stories. The skilful treatment of this is particularly worthy of study. It is no mere affair of a ledge interrupting the vertical rhythm of the building, but has rather the appearance of growing out of the main walling, and the sweeping lines of the simple but strongly marked brackets carry the eye upwards to the overshadowing cornice which protects the frieze.

A very good example of Burton's indifference to the rigid claims of style is seen in his design for the entrance

ST. JAMES'S CLUB: DOORWAY IN COFFEE-ROOM.

to admire. Internally the most impressive feature grand staircase, which must rank amongst the great ples of London.

the opposite side of Waterloo Place is the Athenæum. nds on what was the west end of the courtyard of arlton House, and was erected from the designs of nus Burton in 1830, at a cost of £35,000. The archi- was only twenty-seven years of age when he received ommission for the building, and it is doubtful if he built anything in later years of equal importance which lequately represented his skill. The exterior of the næum is more Roman than Greek, and, with the tion of the Parthenaic frieze (which was modelled by cottish sculptor John Henning), there is nothing on hall of the club, which has a Roman barrel ceiling, richly coffered, supported by Greek Corinthian columns modelled on the well-known example from the Tower of the Winds at Athens. The effect of this hall, with the grand staircase on the central axis branching into two flights from the first landing—the approach in a subdued light, and the staircase brightly illumined by a large octagonal skylight placed centrally over it—is extremely impressive. The present colour-scheme, carried out under the direction of the late Sir Lawrence Alma-Tadema, is a most effective one. This hall is altogether very harmonious in effect, and the club owes much to Alma-Tadema's wonderful feeling for colour. The various rooms of the club are grouped symmetrically around the staircase.

Proceeding along Pall Mall East, the next club to the Athenæum is the Travellers', which was built in 1832 from the designs of Charles Barry, for what would now seem to be the very moderate sum of £23,000.

The elevation of the club to Pall Mall is a masterpiece of quiet and forceful composition, the severely rectangular form, with the division of the upper and lower stories marked by the finely executed string-course, the regular espacement of the windows, the balance between wall surface and openings, the carefully subordinated doorway, the whole crowned by a cornice of well-considered dimensions and parts, makes an irresistible appeal to the lover of the chaste and orderly. The treatment of the first-floor windows is particularly successful; the square pilasters covering the angles of the openings are, for many reasons, to be preferred to the three-quarter columns employed in the first-floor windows of the Reform, which look as if they were partially buried by the main walling of the building. The rear façade facing Carlton House Terrace is much more original, though not less beautiful.

The plan of the building is quite as interesting and as well deserving of study as the elevations. Certain alterations have been made; these, however, have not b destructive, so that the building remains very much Barry designed it.

The Reform Club owes its name to the famous Bill 1830–32. An open competition for the design was held 1837, when Barry—in preference to Blore, Basevi, Decim Burton, and C. R. Cockerell—was awarded the first pla and received the commission.

The front to Pall Mall, with its rhythm of plain w surface and regularly spaced windows, undisturbed by a extraneous additions in the shape of columns or pilaste with its frowning cornice of majestic dimensions, its ou guard of protecting parapet walls, and the finely detai lamp standards, has such an appearance of splendid solid that the doorway, beautiful as it is, is at first sight felt be almost an intrusion. The treatment of this doorw was one of the greatest difficulties that Barry experienc in the working out of his design. He considered, a rightly, that a porch treatment would be altogether o of place, and though in deference to the suggestions critics he tried various columnar and pilaster treatmen all of which he felt were too disturbing to the uniform

BOODLE'S CLUB: DOORWAY IN SALOON.
ARCHITECT UNKNOWN (AT ONE TIME ATTRIBUTED TO ROBERT ADAM)

BROOKS'S CLUB, ST. JAMES'S STREET: THE LARGE SMOKING-ROOM.
ARCHITECT UNKNOWN. (ASCRIBED TO HENRY HOLLAND OR JAMES WYATT.)

of his front, he finally abandoned them in favour of the direct simplicity of the executed design.

The Conservative Club, though geographically situated in St. James's Street, in design and character belongs to the Pall Mall group. The design was the joint work of George Basevi and Sydney Smirke.

To return to Pall Mall, the next club to engage our attention is the Carlton, which is more than a club—it is an institution. Built in the Italian manner favoured in the 'fifties of last century, at a time not usually considered to be altogether favourable to the finest expression of the Arts, it is nevertheless an exposition of a very complete and definite idea.

On the opposite side of Pall Mall to the Carlton is the Army and Navy, at the corner of King Street leading to St. James's Square. Externally, I consider this is one of the finest club-houses in London. It was built in 1848 from the designs of Messrs. Parnell and Smith, who adopted as their model the Palazzo Rezzonico at Venice.

The Royal Automobile, by Messrs. Mewès and Davis, marks a definite break with the old form of club-house, and inaugurates a new era in club design. In effect, the Royal Automobile Club is something more than a club, and has some of the characteristics of an hotel—it is the largest of all the London clubs; in fact, I believe it is the largest club building in the world—and I think you will agree with me that architecturally it quite holds its own when compared with any of its distingui neighbours.

There are several other clubs, both new and old, w I should have liked to deal with had time allowed. chief object I had in view in making my selection to give as far as possible some connected history of building from about 1760 to 1860, the great period of design, and as a contrast and a climax a few notes on Royal Automobile.

Discussion

The Rt. Hon. Lord Justice Warrington (chairma committee of the Athenæum) thanked Mr. Ramsey fo excellent paper. As a layman he did not feel compe to express a view as to the architectural merits of th that building, but perhaps he would be at liberty to his opinion on matters of taste. He felt that the build of the eighteenth century were more simple and r dignified than those of the later period. Dignity scholarship characterized all the work of the eighte century, and those qualities extended to literature as as architecture. Of the buildings of the later period most attractive was the Travellers' Club; its simple fa was exceedingly fine, and the rear elevation was a fi counterpart of the front. There was one thing w appeared to him to be bad in the design of the Un

THE ATHENÆUM CLUB: ENTRANCE FRONT.
DECIMUS BURTON, ARCHITECT.

THE ATHENÆUM CLUB: ENTRANCE HALL AND STAIRCASE.
DECIMUS BURTON, ARCHITECT.

Services Club. It was that portico on the western side, which had no meaning. If the plan were truthfully expressed on the exterior the portico should be where the main entrance lay. Compare this with that which it was set to balance—the portico of the Athenæum. That was dignified and truthful, for it was the entrance of the club. As they came down later in time, they found that the mid-Victorian work was on the down grade; it was more florid, and lacked the character of simplicity. For instance, take the Carlton Club: the cornice of that building was too heavy, and not fitting. As to the modern work, the Royal Automobile Club showed that they were going back to the simplicity and dignity of the eighteenth century, as did much of the building put up during the last thirty years.

General Sir Henry Mackinnon (chairman of the Travellers' Club) said that he had little to say except that the Travellers' was the best club in London The Travellers' was sandwiched in between two great bullying buildings, and of one of them the learned judge was a most distinguished member. So he came to this meeting a little timorous, prepared for the worst; but in view of the nice things said that evening about the Travellers' he could say nothing; he felt a perfectly new being. The only great point of difference between the Travellers' and its big neighbours was as to the correct method of the extermination of rats—a matter of great difficulty in that part of Pall Mall.

Mr. Davis said that he had only one fault to find with Mr. Ramsey's paper: it was not long enough. The desi ing of a modern club was a somewhat different problem fr that of the eighteenth-century club. The increase a variation of different needs in a club called for plans wh were far more complicated. In the eighteenth centur few large rooms were sufficient, but nowadays there w so many new large and little features which one had embody in a plan. Just at the moment it was not lik that many new clubs would be built, but good work mi be done in turning old houses of architectural value i clubs.

Mr. Hiorns remarked on the great beauty of the P

THE UNION CLUB, TRAFALGAR SQUARE: MORNING ROOM.
SIR ROBERT SMIRKE, R.A., ARCHITECT.

Mall group of clubs, which might be called the Latin Quar of London from the character of its architecture. Th was nothing finer in London than that view of the Athena on the corner and the Travellers' and Reform beyo That, with the Duke of York's Column, was more suggest of Imperial Rome than anything in London.

Mr. Paul Waterhouse said that Mr. Ramsey was to congratulated in handling such a difficult subject in su an able way. It was a very difficult matter to string gether a great number of buildings in a lecture of this s without its becoming a catalogue of buildings accompan by slides. Mr. Ramsey had avoided this. He continu that they must all be grateful for having had those delig ful glimpses into the interiors of some of these clubs. M of them were members of one club or another, and m

hem were familiar with the exteriors of them all, but e of them could be a member of them all or know what insides were like. Referring to the remarks of Mr. is he said that although the requirements of the modern had changed considerably since the eighteenth century, he felt when he saw that beautiful plan of the Royal Automobile Club on the screen that the Automobile Club was a club of different character from any other. It was an enormous club, with an enormous membership.

F. E. T.

My Views on High Buildings

By SIR MARTIN CONWAY

T is urged by several eminent authorities that the increasing amount of business to be done in London within a relatively restricted area logically involves that office buildings should be permitted to grow to eater height than the present Building Regulations iit. The expansion of London must be either vertical orizontal. It is claimed that the time has come when cal growth is practically essential. But vertical growth be of two kinds: it may either be universal over a area, or it may be confined to particular spots within area. Hence those who are in favour of vertical nsion divide themselves into two classes, namely, who would favour a general increase equivalent to t one storey on the top of buildings of the nt maximum height, and those who are in favour recting a limited number of very lofty towers or scrapers."

The Gloom of London

e climate and atmospheric conditions of London are iar. For a considerable part of the year London s from lack of light. Foreigners call it gloomy. It s lack of light that has caused the Regulations limiting eight of buildings. The higher the buildings on either of a street the gloomier does that street become. If hole level of buildings in the crowded part of the metro- were raised, the gloom of the streets during at least nonths of the year would become almost intolerable, he expenditure on the artificial lighting of the lower s would be greatly increased, with corresponding y to health and diminution of working energy. But y tall buildings were allowed to be raised at relatively y separated intervals no such gloomy result would be iced. The buildings in the immediate proximity on orth side of a high tower undoubtedly would suffer of light and might have to be compensated for that but the effect would not extend far. On the other every floor of the tall building above the normal level surrounding houses would be very much better lit, would possess various other amenities.

Skyscrapers—

ave never been able to understand the prejudice that in this country against "skyscrapers." It is said that would reduce to insignificance the spires and towers urches, and would thus destroy the picturesqueness e general views of London; but the height of all m buildings in the City of London is so much greater that of the old houses in relation to which the towers churches were designed that the effect of those towers, as they used to do out of the general mass, has long anished. This anybody can perceive who enters on by train along one of the many elevated tracks.

—In Limited Numbers

rty or forty well-designed "skyscrapers" rising out City of London, so far from damaging its general , would greatly improve it. I have never worked ie statistics of the gain, but it is quite obvious that a er, even a small number, of buildings forty stories would increase enormously the office accommodation within the city. They would not merely increase the accommodation, they would also provide a new accommodation of a greatly superior kind to any now available. Airmen tell me that the increase of light over an English town is very rapid, and that even a couple of hundred feet above the ground level you have emerged into a different atmosphere.

Some Advantages

Those who have had experience of working in tall buildings in America know how pleasant it is to be raised above the noise and murk of the street to a level that commands a wide extending view, purer air, and the very remarkable quietness which is quickly reached. Indeed, the competition for offices is greater in the upper than in the lower parts of a "skyscraper." Such buildings, however, must not be permitted to stand in one another's way and reproduce present discomforts in an exaggerated form. Whether an interval of 200 yds. between one and another would suffice or whether a longer interval should be prescribed is a matter about which I am not able to pronounce. Such a question can only be determined by experiment, easily made when a single tall building has been erected.

The Housing Aspect

Whether tall buildings for residential purposes would solve any of our problems of overcrowding is worth discussion. It is, of course, primarily an economic question. Anything that would prevent the further expansion of London over the home counties and the destruction of the beautiful country by which London is surrounded would be a great blessing. If any considerable portion of the enormous population of London is to be housed in garden suburbs, at least half of the home counties would have to be submerged, and the dwellers in London would have to take a railway journey of some length before they could reach the country.

Vertical Expansion Necessary

It is far better to live under regular town conditions in a compact city, and to have real country within easy reach, than to live in the half-town half-country state of suburban dwellers. The concentration of population in a city enables that population to enjoy those opportunities for culture and entertainment which are provided by the theatre, concert hall, museum, library, and other co-operative enterprises. A vast wen of suburbs would scatter the public so widely that most of them would be beyond easy reach of such privileges and pleasures. The dwellers in such places would become practically villagers without the country joys. The cry for more and better housing, involving as it now does the erection of a separate house for every family, might in time cause the expansion of our large cities over an immensely greater area than they at present occupy. The results would be in the highest degree injurious. They can, I think, only be prevented by discouraging horizontal and encouraging vertical expansion in all our great centres of population. Such vertical growth, however, unless it is confined to particular spots, and accompanied by a provision of plenty of light and plenty of air, will plunge our people into yet gloomier surroundings than those from which they now desire to escape.

Building Exhibition Stand and Lay-Out Competitions:

Assessor's Awards and Report

FORTY designs were submitted in the above competitions—thirty-four for stands and six for lay-outs. These were numbered in the order in which they were received, placed on exhibition in our offices, and there assessed by Mr. W. G. Newton, M.C., A.R.I.B.A., President of the Architectural Association.

It may be recalled that prizes were offered as follows :—

For the Stand—First, £10; second, £5; third, £2; and five consolation prizes of £1.

For the Lay-out—First, £10; second, £5; and five consolation prizes of £1.

The response being rather poor in the case of the Lay-out competition, it was decided to split the second prize into two (£3 and £2 respectively), and to transfer two £1 consolation prizes to the Stands section.

On opening the sealed envelopes corresponding with the mottoes on the various selected designs, Mr. Newton's awards were found to be as follows :—

Stands

First (£10), "Badinello." Mr. T. F. Rippingham, A.R.I.B.A., 42 Upper Manor Street, Chelsea, S.W.

Second (£5), "Orion." Mr. B. W. Billinge, "Sahiaie," Weydon Hill Road, Farnham, Surrey.

Third (£2), "Cabot." Mr. J. Crowe, O.B.E., A.R.I.B.A., 7 New Square, Lincoln's Inn, W.C.

£1 Consolation Prizes.

"Gaza." Mr. Raymond C. White, 4 Brerton Hill, Aylesbury, Bucks.

"Salonika." Mr. W. J. Palmer Jones, 11 Buckingham Street, Adelphi.

"Meall Beag." Mr. Frederick G. Montague-Butlin, A.R.I.B.A., "Naseby," Woodberry Way, North Finchley.

"Croce." Lander, Bedells, and Crompton, 6 John Street, Bedford Row, W.C.

"Isis." Mr. Charles Henry, 27 St. Vincent Crescent, Glasgow.

"Juzzak." Mr. Fred W. Andrews, 62 Grange Park Road, Thornton Heath, Surrey.

Anonymous. Mr. Richard B. Ling, A.R.I.B.A., 13 Hillcrest Road, Sydenham, S.E.

Lay-outs

First (£10), "Hoo." Mr. Percy J. Adams, A.R.I.B.A., "Bossinney," Monkhams Avenue, Woodford Green, Essex.

Second (£3), "Sphinx." Mr. G. A. Bryan, A.R.I.B.A., M.S.A., 17 Rosedew Road, Hammersmith, W.

Third (£2), "Topaz." Mr. M. Stanley Balmer, 60 Lavender Sweep, Clapham Common, S.W.

£1 Consolation Prizes.

"Inconnu." Mr. N. B. Payne, 91 Birchanger Road, South Norwood, S.E.

"Mylo." Mr. R. A. Mill, Licentiate R.I.B.A., 3 Westwell Street, Plymouth.

"Spiral Twist." Messrs. Mark H. Judge and Son, 17 Pall Mall East, S.W.

Cheques have now been sent to the various prize-winners.

Special note: All designs are copyright.

Mr. Newton's report is as follows :—

Stands

The essence of an exhibition stand is advertisement. The aim of advertisers is to induce a pleased recollection. To achieve this a stand should be in itself both striking and attractive—a picture you can, and wish to, carry awa your mind. Then by association of ideas the contents, will be recollected with pleasure.

In cases where the material of which the stand is mad itself the advertised product, enough is done if this me picture is created. But in most cases there will have t room for a display of goods. Here is need for easy acc and yet it mustn't be all access. The patron must encouraged to linger, and there must be corners for hir linger in. And light must be remembered, and the st ture kept simple.

Of the designs sent in, "Badinello" seems to fulfil above conditions best. The design is attractive, and w be remembered. It is suitable for the goods it displ There is room to come and go, and room to wait. carries a simple flavour of Eastern bazaars, and ad glamour to salesmanship."

"Orion's" is a simple and pleasing building sho some of the possibilities of the material of which it is and which it is intended to advertise.

The stand by "Cabot," in a slightly more *outré* s offers a resting-place where its furniture contents ca peacefully noted. Any place where you can sit dow remembered gratefully in an exhibition at Olympia.

Of the rest, "Gaza" somewhat ponderously offers s and display for the literature it houses; "Salonika" w be remembered, and perhaps with pleasure, though is nowhere in it to stop and think about it; "Meall-B offers a simple opportunity for the display of pai panelling, enclosed yet accessible, and normally lit; " unpretendingly shows goods so that they can be seen "Croce," though useless as a display stand, might behind a memory which would encourage the visit connect with architecture the publication it advertises.

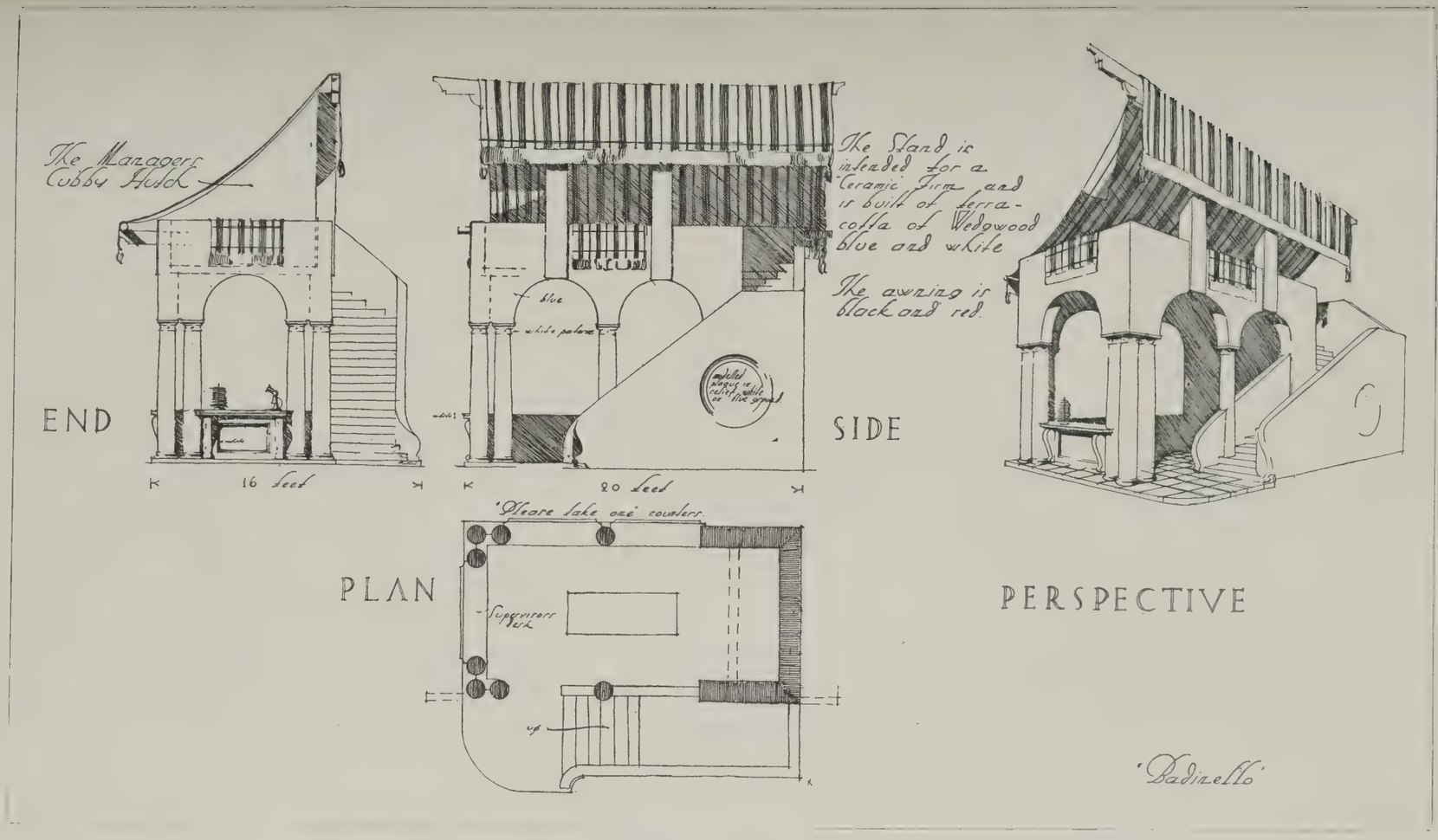
Lay-Out

Few competitors had the courage to tackle the of Olympia's Lay-out. The problem is a hard one would seem to be impossible if every stand is to ha gangway all round it, and yet the total number kept the same as it now is. Nevertheless, it would be worth the while of the promoters to consider this que Fewer stands better disposed would leave a more profi impression on the visitor. The present welter is u distressing, and the final impression one long fatigue.

Of the designs submitted, that by "Hoo" shows c thought and study. The entrance is not blocke stands, the cross-exits are reasonably well emphasize mass of exhibitors broken up into trades, and the mult of stands simplified by the central gangway with its cu and the subordinate centres formed by the prize st The stands are all practical in shape, though some of have only a short frontage, and few are island sites. entrance to the Pillar Hall should have been made m A band is an asset of very doubtful value to a bu exhibition.

The only other designs which need attention are "Sph whose lay-out is sensibly rectangular: the central would be a help, and the cross-exits are perhaps emphasized than by "Hoo"; and "Topaz," who pr a good clear entrance, but with his radial ways giv designer of stands some hard problems of shape.

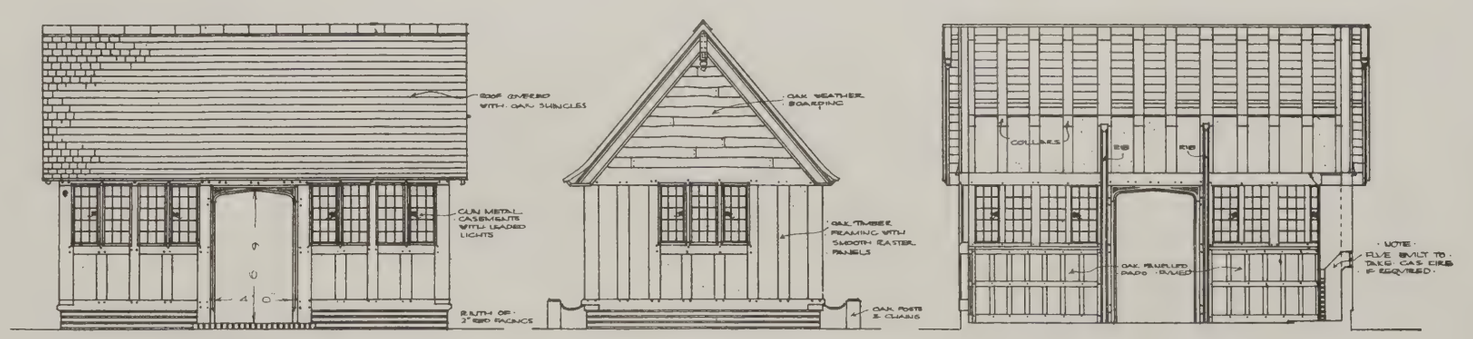
WILLIAM G. NEWT



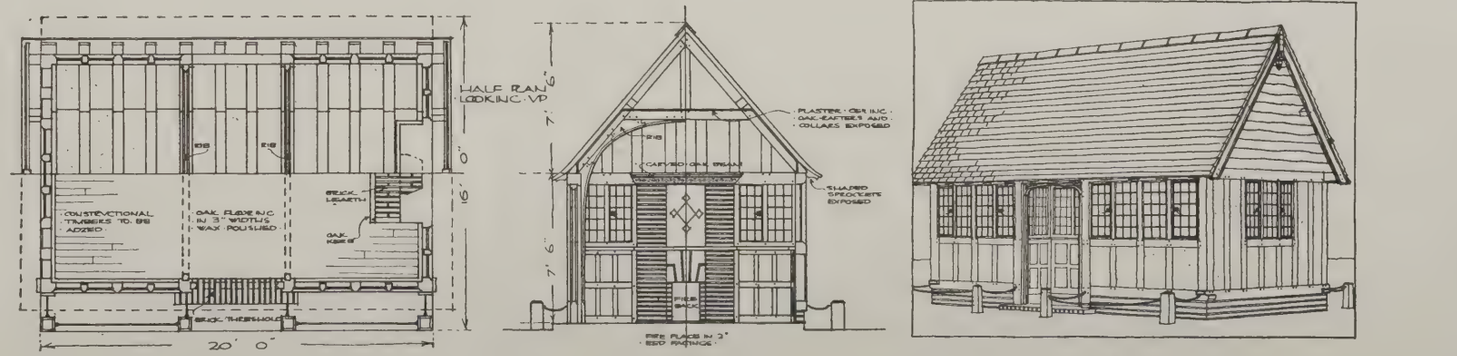
"ARCHITECTS' JOURNAL" BUILDING EXHIBITION STAND COMPETITION: FIRST PREMIATED DESIGN
BY T. F. RIPPINGHAM, A.R.I.B.A.

· BUILDING · TRADES · EXHIBITION · 1922 ·

· STAND · FOR · TIMBER · MERCHANTS ·



· FRONT · · SIDE · · SECTION ·

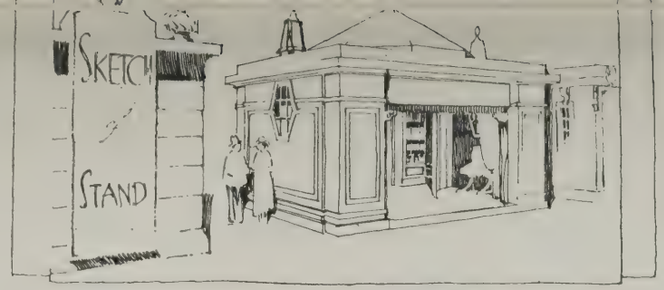


· PLAN · · SECTION · · VIEW ·

· BY · "ORION" ·

SECOND PREMIATED DESIGN — BY R. W. BILLINGE

DESIGN FOR EXHIBITION STAND at OLYMPIA

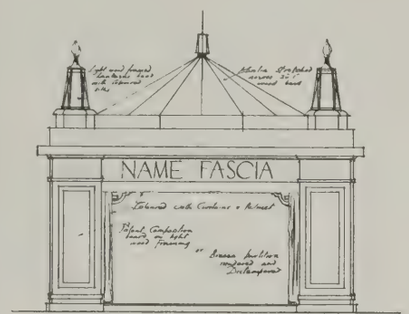


MATERIALS & DESCRIPTION:

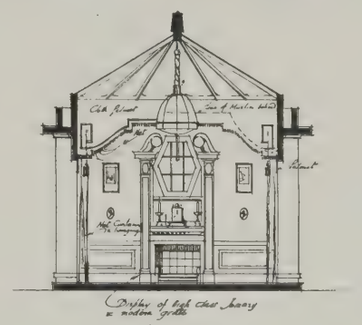
THIS STAND IS ARRANGED FOR GENERAL EXHIBITION PURPOSES: THE OFFICE CAN BE CURTAINED OFF IF REQUIRED FOR PRIVATE BUSINESS TRANSACTIONS WITHOUT UNDULY UTILISING VALUABLE FLOOR SPACE: THE ACTUAL FINISHINGS WOULD DEPEND UPON THE NATURE OF GOODS TO BE DISPLAYED WHICH IN THIS INSTANCE IS FURNITURE & HIGH CLASS JOINERY:

THE STRUCTURE IS OF BREEZE CONCRETE SLABS WHITENED - THE PANELS - CORNICE ETC. TO BE OF WOOD OF SIMPLE SECTION: DISTEMPER & INTERIOR DECORATION TO SUIT THE FITTINGS:

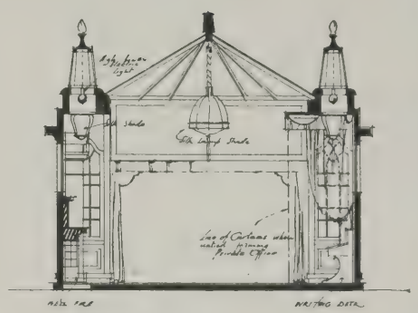
NOM DE PLUME: 'CABOT'



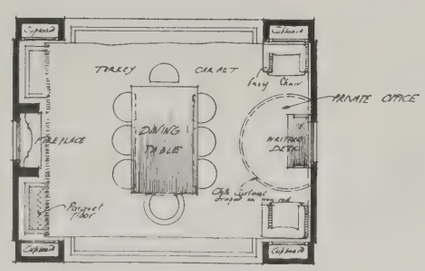
Front.



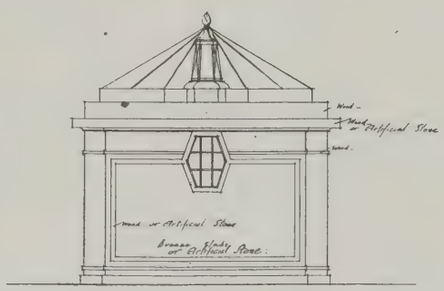
Cross Section



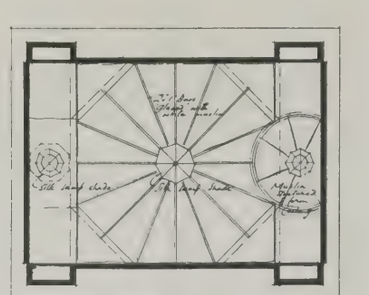
Longitudinal Section



Plan

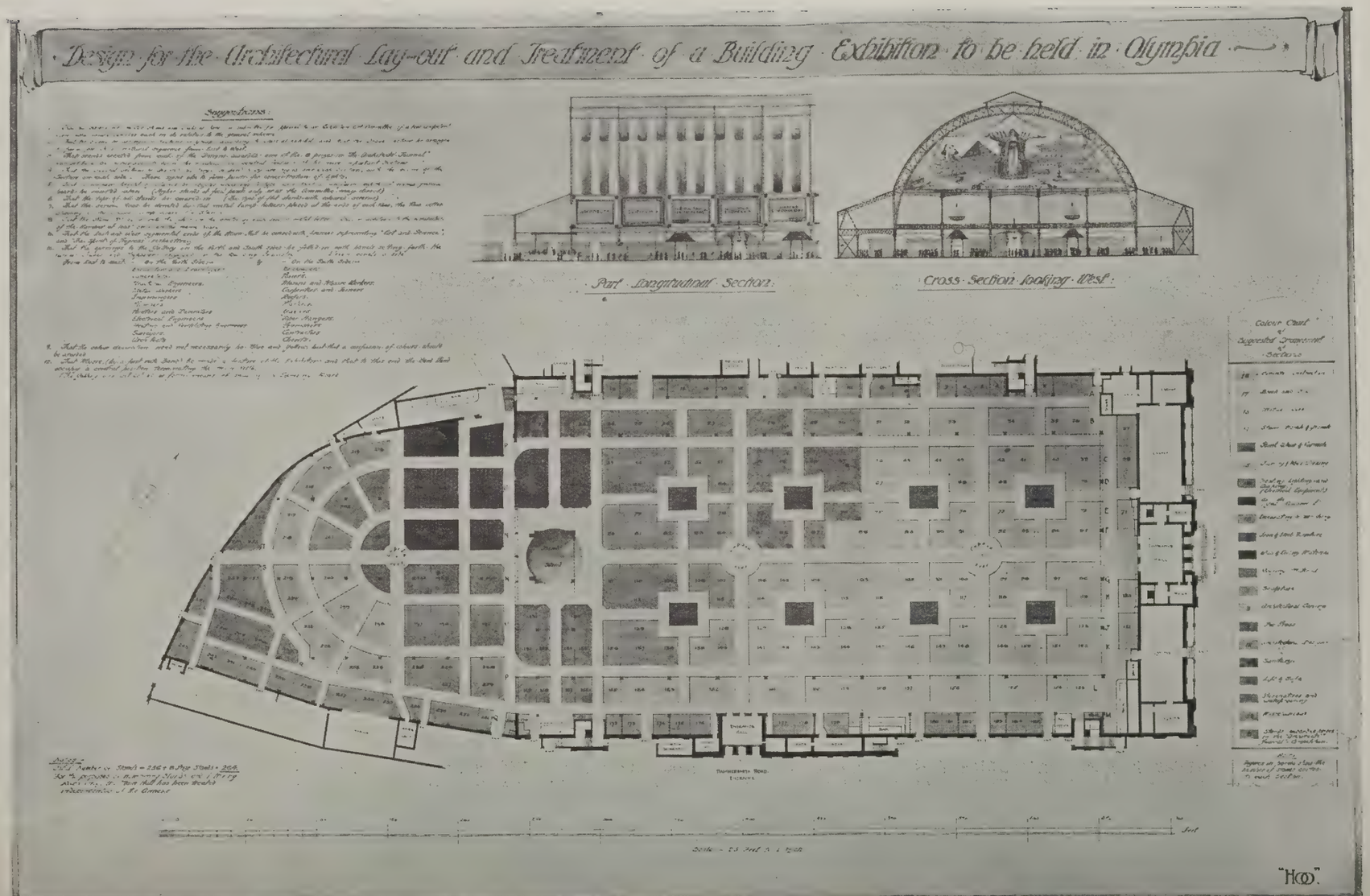


Sides

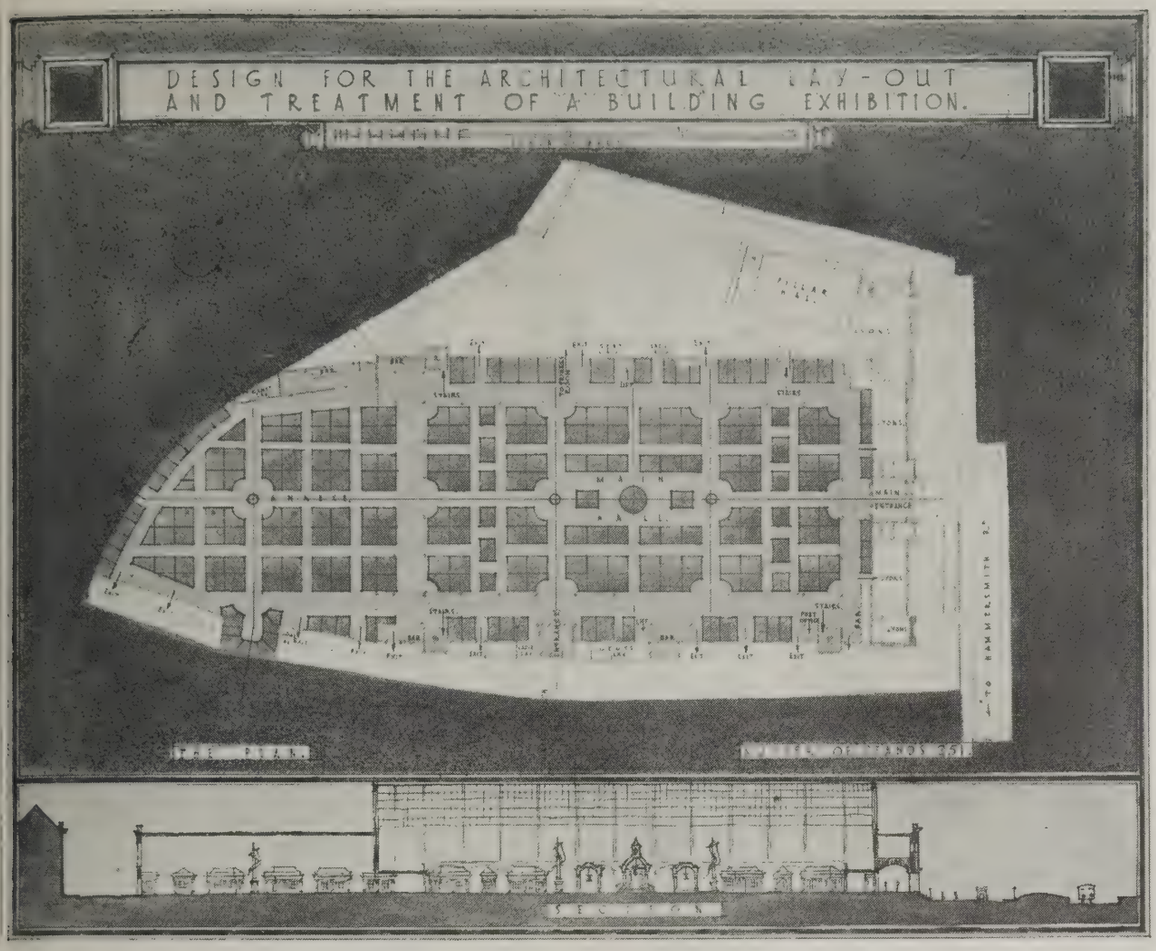


Ceiling Plan:

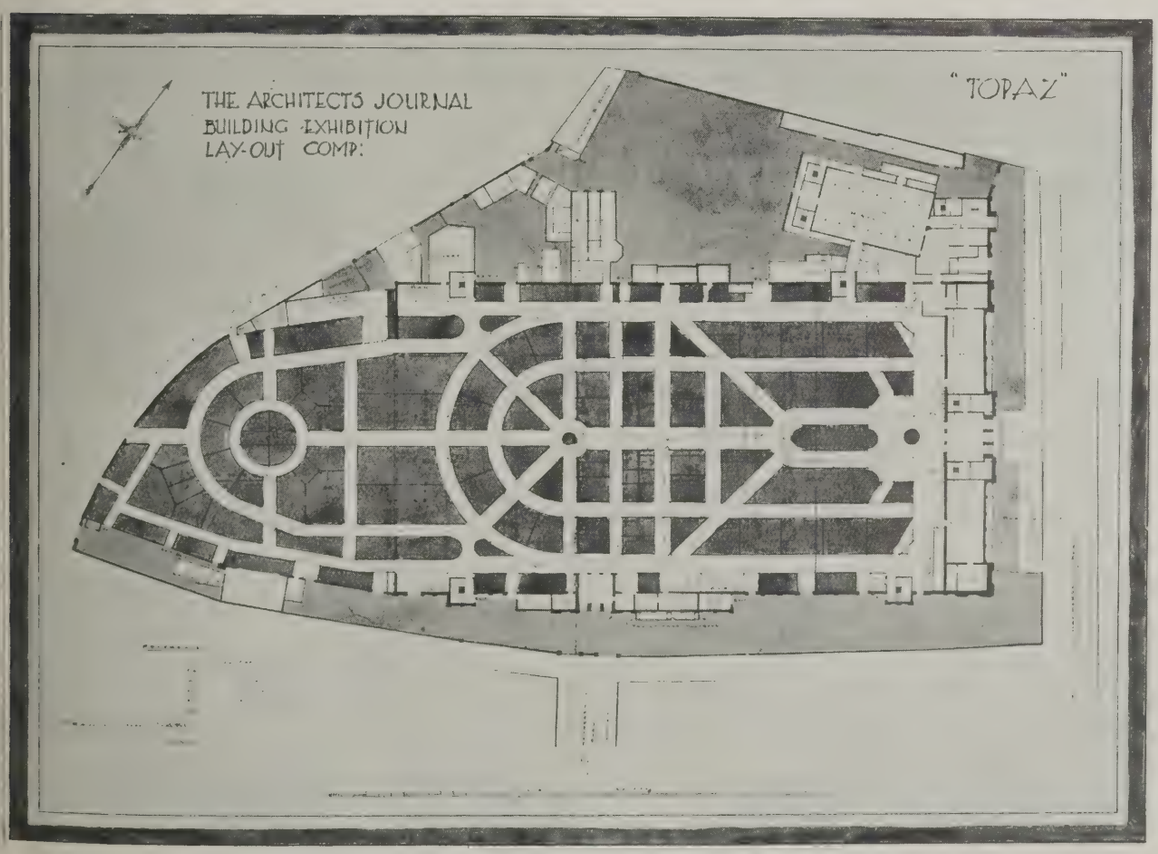
THIRD PREMIATED DESIGN. BY J. CROWE, O.B.E., A.R.I.B.A



"ARCHITECTS' JOURNAL" BUILDING EXHIBITION LAY-OUT COMPETITION: FIRST PREMIATED DESIGN.
BY PERCY L. ADAMS, A.R.I.B.A.



SECOND PREMIATED DESIGN. BY G. A. BRYAN, A.R.I.B.A., M.S.A



THIRD PREMIATED DESIGN. BY M. STANLEY BALMER

An Exhibition of Modern Dutch Housin

AS an exhibition of modern Dutch housing work, the present show at the Architectural Association is frankly disappointing, omitting, as it does, almost all reference to what is most generally understood by the term "housing" in England—namely, the small one-family house.

Owing to the position of benevolent neutrality in which Holland found itself during the war, it was able to proceed with the solution of its housing problems almost unchecked, so that though only having a total population of something less than London, there were nearly 60,000 war or post-war houses complete last summer.

England was probably the pioneer of housing reform, especially in the matter of the small house, but Holland has taken it up with such success as to have left us quite a distance behind in the matters of lay-out and external design. The individual plans are disappointing, and show a total disregard of many of the things we deem essectial; for instance, the ventilation of w.c.'s and larder, and the position and lighting of staircases. The rooms, too, are smaller than ours, and with far less cubic space, and so far as one can see bathrooms are seldom provided, a small, very small, basin on the landing or in the hall being usually considered sufficient. Their staircases are very steep indeed, being usually at an angle of from 50 degrees to 60 degrees; but this is customary even in houses and hotels of larger size, and is supposed to be a legacy from the time when a large part of the population actually lived in boats.

BLOCK OF TENEMENTS.

Whatever may be said of the designs on exhibition—and many and various are the opinions expressed—there can be no doubt about their freshness and originality and their designers obviously get the utmost fun out of the work. One can ha

From the Dutch Housing Exhibition at the Architectural Association.

BLOCK OF TENEMENTS.

a Hollander to be romantic, but of the designs shown get very near spirit.

treatment of angles is especially clever; and in this country, where angles and street junctions so seldom get enough thought, a study of these Dutch drawings would be amply repaid.

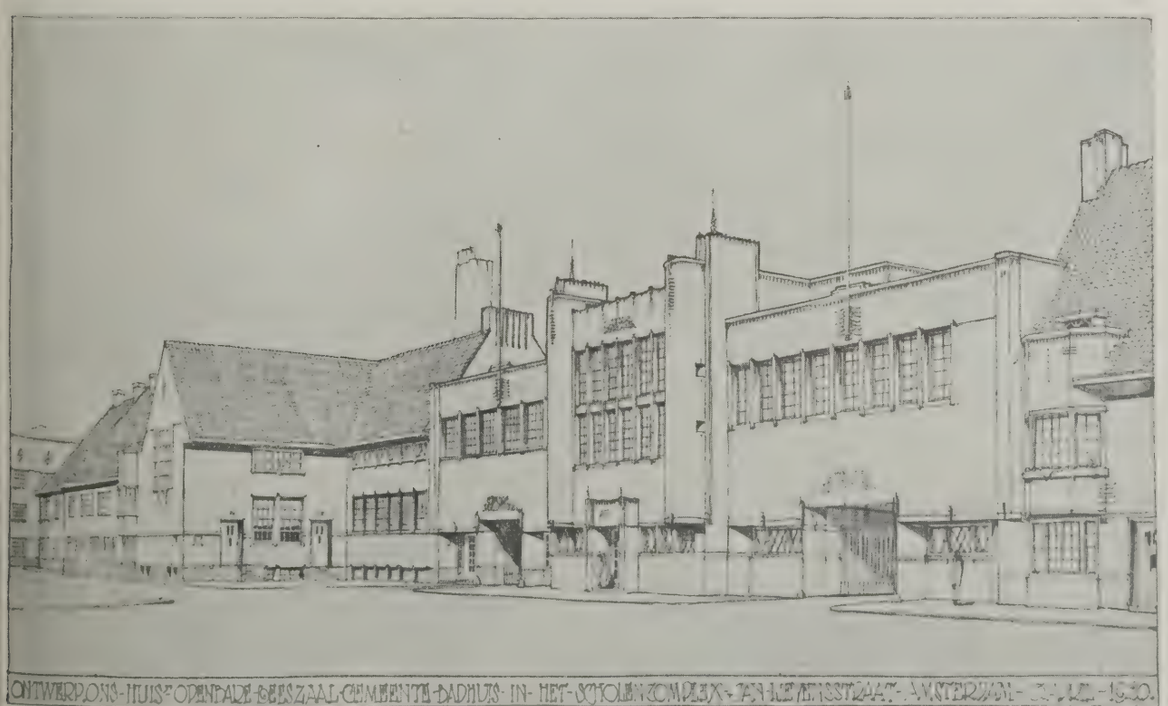
The favourite treatments seem either to be the usual canted angle, which finishes, however, as it should, in an octagon at the top story; or gable ends stopping at right angles to one another some distance from the actual junction and joined at the angle by a flat-roofed building of less height.

We cannot but envy the absence of restrictions and the presence of funds which enables them to build parapets apparently high above their topmost ceilings, which give such a good sky line to these streets of tenement buildings.

The massing of many of the groups is masterly, showing such a keen appreciation of form and shape that one supposes that modelling takes a big place in the curriculum of the Dutch architectural schools, where evidently the making of merely pretty drawings is as strongly discouraged, for pure line perspectives and elevations seem to be the vogue. In a show for architects what more could one want?

As a good example of more or less traditional German treatment, the block of tenements shown on p. 544, with their mansard roofs and excellent proportion, could hardly be improved upon, and typical of what is best in modern Dutch work are the designs of Dr. Berlage and his associates. Dr. Berlage, it will be remembered, is the pioneer of the modern movement in Holland, of which about the earliest example is the Bourse at Amsterdam.

The block of tenements shown on p. 547, with their octagonal corner treatment and well-marked entrances and staircases, is perhaps, the best thing in the show. Alternating courses of bright blue and red, presumably glazed, bricks mark the angle windows; the staircases have vertical stripes of yellow and red, of what material is not apparent; the parapet treatment looks very well. The doors themselves are painted green, orange,



From the Dutch Housing Exhibition at the Architectural Association.

WONINGBOUW, DE DAGERAAD" WONINGBLOK AAN 'T IJ OF D' TRAAN.

AMSTERDAM WONINGEN DER DAGERAAD" AAN DE MR J. STEVENHAGENLAAN DOOR DE N.V. WONINGBOUWVER. „HET OOSTEN" AAN DE GEM. MOOLENBEEKGRACHT EN DOOR BOUWVER. „ONS BELANG" AAN DE WATERLANDERGRACHT.

COMPLEX ARBEIDERSWONINGEN BIJ DE UITBREIDING ZUID BIJ HET STATION TE AMSTERDAM

GEMEENTELIJKE WONINGBOUW, AMSTERDAM, TRANSVAALBUURT DOOR DE ARCHITECTEN

purple. Dutch architects delight to doors painted in an enormous ty of colours, which adds greatly ıe gaiety of their housing schemes; over, they are constantly repainting, their clearer atmosphere gives colours tter chance than is the case in this try.

ing to the other extreme from the roof and tall parapet type of build- are some with very widely projecting s and flat-pitched roofs.

ıny examples are shown of covered ways across streets; these, with the equent difficulty of planning, seem ssible in England, but they would nuch to prevent that terrible "scat- l" effect so prevalent in English ing schemes and garden cities and rbs.

ıe small communal buildings, of h an example is illustrated, are good novel in expression, and their in- rs are decorated in a great variety ıtertaining ways.

ıe cannot help regretting that no ıples are shown of Dudoc's work at ersum, near Amsterdam, of the first en suburb at Rotterdam by Grandpré, ere, and Kok, or of the Rotterdam Dock Company's village by Baarn- for these would be more helpful to ulk of English house designers, who orced to deal with the small unit of one-family type of house. In spite is one leaves the exhibition, as one s Holland, with the feeling that the ing of the workers there gets a good more attention and gives a good deal entertainment than the same occu- n does in this country.

C. H. JAMES, A.R.I.B.A.

he Exhibition of Modern Dutch sing at the Architectural Association remain open until April 24th. All who are able should make a point utting themselves into touch with ontemporary architectural thought other nation.]

Cardiff Conference—Preliminary Public Lecture

In connection with the R.I.B.A. Conference—to be held in Cardiff from June 8 to 10—a lecture entitled "Architecture and the Citizen" has been given in the Technical College by Mr. W. S. Purchon, M.A., A.R.I.B.A., head of the Department of Architecture and Civic Design in that institution. In view of the coming conference the lecturer is endeavouring to interest the people of South Wales in architecture and in the R.I.B.A. by a series of articles in the local press; and the lecture was given, under the auspices of the South Wales Institute of Architects, with the same object.

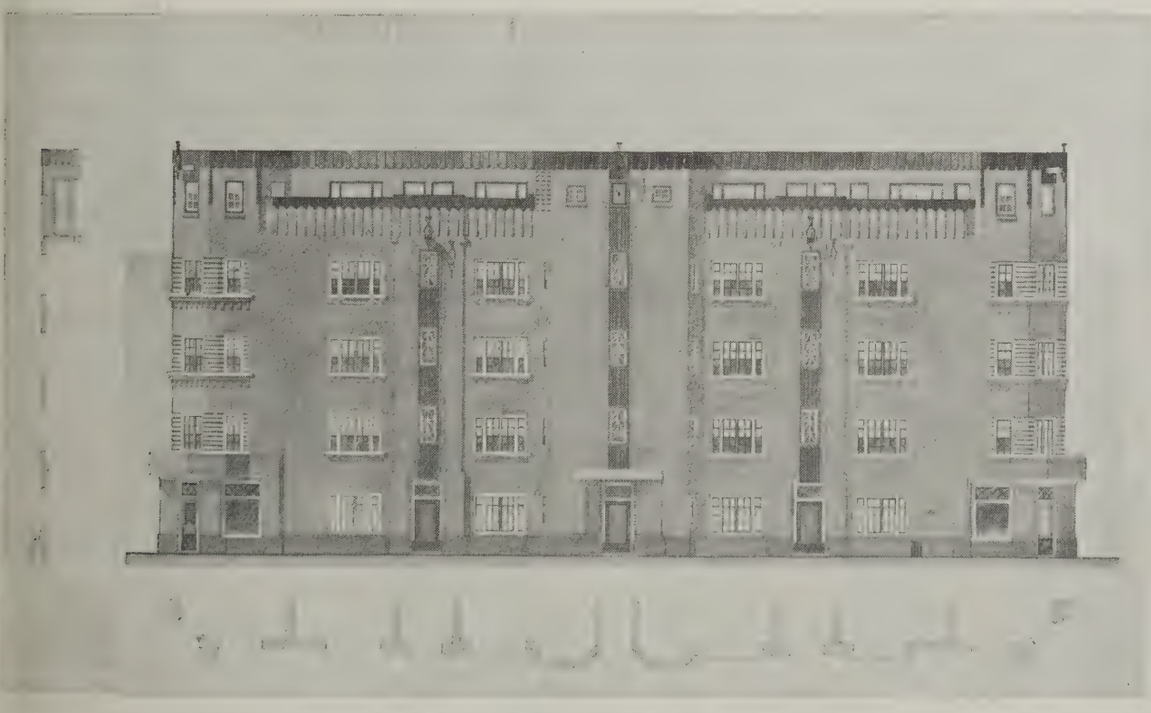
The lecture opened with a brief survey of the world's great buildings, the lecturer endeavouring to indicate in this manner the great traditions of the art of architecture, its higher significance, and its relationship to the people. Two or three buildings of each of the great periods were dealt with, together with some examples of town-planning and of well-designed railway stations. The lecturer then attempted the somewhat difficult task of explaining the Greek and Gothic Revivals, the movement initiated by George Devey, Norman Shaw, and others, the New Art Movement, and the introduction of Néo-Grec. He then indicated the useful work which had been done by architects in improving the conditions in factories, and cleared away some of the misunderstandings as to the part played by architects in housing work, showing how the English architect, by working from our fine traditional types, had established his supremacy in this particular sphere of architectural activity. In recent housing work he had done everything to improve the plans and external treatment of houses and the general lay-out of housing schemes.

The comparatively haphazard method of dealing with town development in the nineteenth century was touched upon, and the need for the regional survey as a preliminary to the preparation of town-planning schemes was emphasized, while some of the special requirements of Cardiff were indicated. After discussing the well-known buildings in Cathays Park and the fire station in Cardiff, various recently constructed buildings designed by eminent architects in other cities were dealt with. Some of the material advantages of architecture to the people were then summed up, but it was emphasized that architecture offered more than this; it was a great art comparable to music and literature in its influence on the minds of the people.

The lecturer referred to the growing need for an increased public interest in architecture, and mentioned that at a recent meeting of the Cardiff Public Works Committee the question was raised as to whether the Corporation could not frame a by-law to give control over the elevations of buildings.

Among the modern examples illustrated in addition to the Cardiff buildings were specimens of the work of Messrs. McKim, Mead, and White; Paul Waterhouse, P.R.I.B.A.; Guy Dawber; Ernest Newton; Sir Reginald Blomfield; Sir Aston Webb, P.R.A.; Mr. Ralph Knott; Sir John Burnet; Messrs. Mewès and Davis; Messrs. Lanchester and Rickards; Walter Cave; Vincent Harris; Frank Atkinson. The lecture was illustrated by a large number of lantern slides.

The President of the South Wales Institute of Architects, Mr. Percy Thomas, O.B.E., F.R.I.B.A., who occupied the chair, explained the object of the lecture, and said that the exhibition of drawings on view in the Assembly Hall represented the first two years' work of the School of Architecture. A vote of thanks to the lecturer was proposed by Mr. Harry Teather, A.R.I.B.A., and seconded by Mr. Chorley.



TENEMENTS AT AMSTERDAM

Little Things That Matter. XI–Copper Roofing

IT is a matter for some surprise that so comparatively little use is made in these days of copper as a roofing material. The main objection seems to be due to the fact that the laying of copper in a thoroughly satisfactory manner is beyond the scope of the ordinary local plumber or coppersmith, and is the work of firms with trained workmen.

These objections should not deter anyone from making use of copper where the work to be executed is of any reasonable extent. For flats, say of 500 to 600 ft. super in area and over, copper is a most suitable material alike for quality, lasting properties, and cheapness.

At ordinary temperatures copper is not altered by exposure to dry air, but when heated it oxidizes rapidly, whilst at ordinary temperatures in *moist* air, in the presence of carbonic acid, it becomes coated with a green layer or scale of copper carbonate, commonly known as "verdigris." This layer is hard and tends to protect the metal from further corrosion. Copper is attacked by sea water with the formation of soluble chlorides, but the extent of the corrosion is dependent upon the purity of the copper and its physical condition; soft metal being more readily acted upon than hard metal. Copper is also rapidly tarnished in the presence of sulphuretted hydrogen and sulphur dioxide owing to the formation of a film of copper sulphide, and of copper sulphate; consequently the metal is usually more readily corroded in manufacturing centres than in rural districts.

The use of sheet copper is not confined merely to the covering of flat or pitched roofs, but it can be extended to the valley gutters, stepped and other flashings, dormer cheeks, soakers, and so on. In the case of small jobs, especially where the actual roof area to be covered is somewhat restricted, a single price could be obtained for the whole of the work. There appears to be a serious endeavour on the part of certain manufacturers to reduce the price of sheet copper, and so place it on the market that it will be to the advantage of those interested to consider favourably its more extended use for building purposes. Sheets for roofing need to be specially rolled to a size of about 5 ft. 3 in. by 2 ft. 3 in.

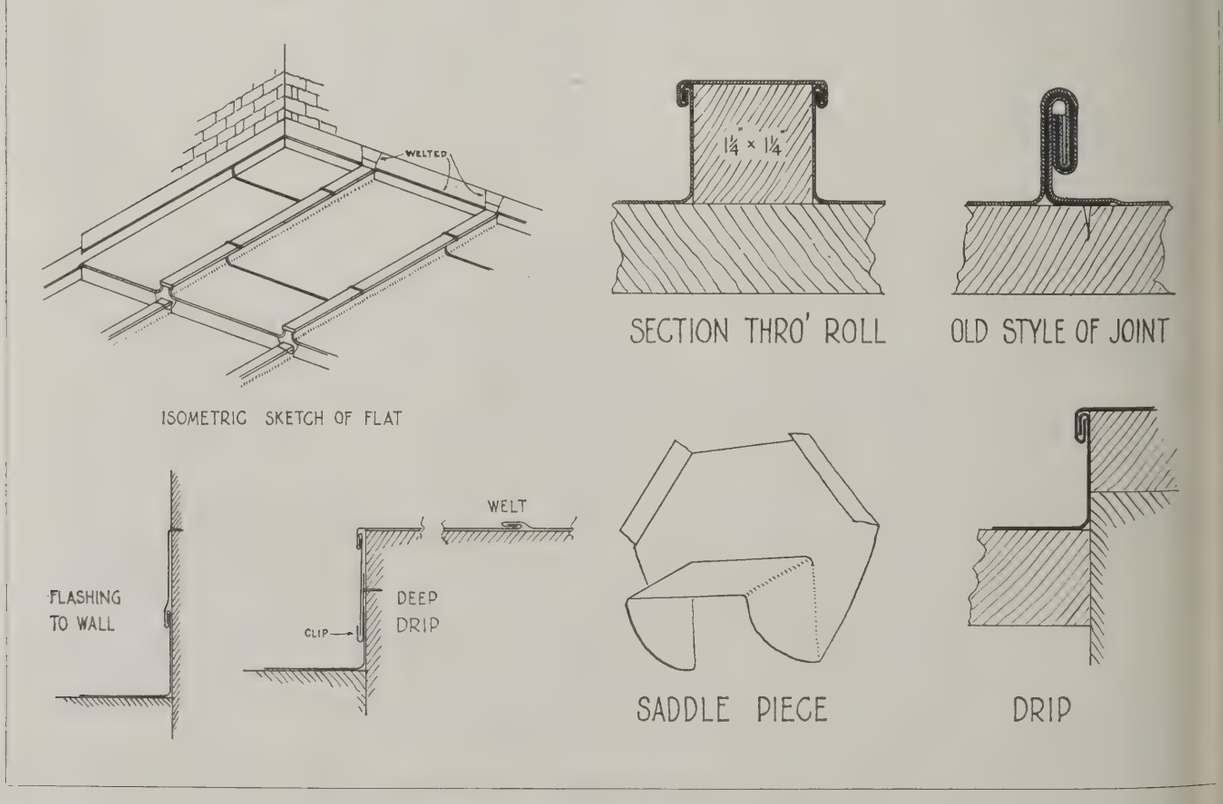
There are in London, I believe, to-day, copper flats which have been in existence for probably 300 years, and are still in fair condition, and certainly there are instances of 100 years' duration. In consequence of the low expansion of the material by heat the sheets can be welted together as tightly as possible, thus ensuring a perfectly watertight joint. Then again, by using copper, light scantlings may be used for the roofing materials. Thus, in the case of roofs covering an extensive area this is a factor which is not by any means to be overlooked.

This saving in material is especially noticeable in the case of dormers and other work where copper is applied in an ornamental character. Owing to its comparative softness and consequent pliability copper can be stamped and moulded or hammered without any damage and, through becoming stiffened in the process, will stand in position wi very little if any internal support. the case of the Royal Automobile Club Pall Mall, I believe, a distinct saving v effected in the dormers and elsewh through this very means. The two m noticeable advantages of copper are t it is practically fireproof and that it so little affected by contact with atmosphere.

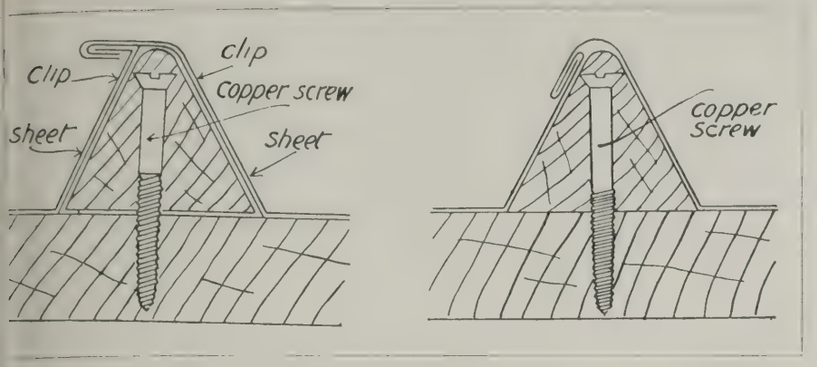
Copper should be laid by skilled han It was usual in early specifications provide for sheets weighing 12 oz. 14 oz. to the foot super. No doubt t was sufficient to make a sound, dura job, but as a considerably higher pr per ton is always charged by the ma facturers for sheets of less than 16 weight per foot super, no advantage gained by using the lighter quality.

It is better in ornamental work to somewhat heavier metal, say 23 gau i.e. 19 oz. to the foot super, for the rea that the stretching which results fr the process of modelling and shap naturally tends to vary the thickness the metal in places. Again, in for times it was customary in laying sheets to welt them together without use of wood rolls, leaving the welts standing. One result of this was t the welts, being unprotected, were ea damaged by the traffic which passed o them, so that in process of time the m exhibited a number of cracks in the di tion of the welt and let in water w disastrous results.

It is nowadays the usual and better way to use wood rolls on boa



DIAGRAMS SHOWING THE APPLICATION OF COPPER ROOFING.



EWART'S SYSTEM OF COPPER ROOFING.

The rolls should be placed about 3 in. centres and the caps welted on to and left open at the sides. The s also are welted together in the tion of their width, and these welts d over the rolls at right angles to length. It is here especially that netal requires skilled handling, as welts, being of several thicknesses tal, are liable to crack in the working. ips in copper roofs are not absolutely sary, but it is better to have them ny large area, and they should be 10 ft. or 15 ft. apart. The saddle s over the rolls and the stopped ends d both be welted on to the rolls, ensuring a complete and sound tight covering, allowance being at the angle of the flat with the r the slight expansion which occurs. necessary to melt the caps, as otherhere is the risk of their opening and using leakage.

Messrs. Ewart and Son have a patent n of covering in which the sheets elted together with clips over the and the saddle pieces are formed the stops out of one piece of metal, ensures absolute watertightness, there are no doubt other patent ns on the market each having their tive merits.

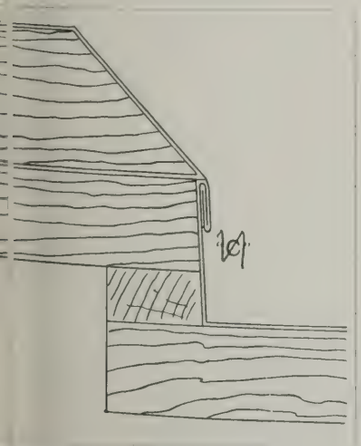
In the case of towers and domes, s, etc., it is customary, when a covering is desired, to use rolls welted caps in a similar manner to roofs; but when ornamentation is red copper tiles are used, which d be fixed from the underside so no piercing occurs in any part of the exposed to the weather.

In circular domes it is better to employ tiles which diminish in size from base to apex. In some cases the plain sheeting and ornamental tiles are combined so as to form patterned ribs on the plain surface. Of course, plain sheeting is cheaper than copper tiles, but some prefer the latter for appearance sake.

Copper domes are generally dear unless of considerable size, but as the copper in time takes on a beautiful green coating of oxide and carbonate there is much to be said in its favour for the enhanced appearance, and there is no risk of the "crawling down," so usual with lead.

Other copper work, such as gutters; flashings, soakers, etc., is carried out in a similar manner to lead work, and therefore needs no particular explanation.

ELFRIC H. SMITH.



DETAIL OF EWART'S SYSTEM.

Enquiries Answered

Stone Preservation.

"Decay" writes: "I have in hand the renovation of a building built in sandstone, and the problem of repairing the decayed stonework is of some difficulty. The stone is, I think, from Northumberland quarries, and the interior is as fresh to-day as when built about fifty years ago, but the exterior has decayed very badly. The outside has been repaired on two occasions, and the decayed work made good at one time with mastic, and at another with Portland cement, and afterwards coated with a mixture of linseed oil (boiled) and white-lead paint and colouring matter. The building at present is a dark grey colour, and it is not the intention to make it look new. It is out of the question to renew the decayed stone by inlaying, on a question of cost. Could you give me some advice on the following points? 1. Do you know of any book dealing with the subject? 2. Is mastic or Portland cement the better material, and can mastic be obtained of a dark grey colour which will not fade and show the usual buff colour? Portland cement mortar could be made of sand from a foundry, and is of a dark colour. Is this suitable? 3. Considering that the stonework has had two coats linseed oil, should I use the same coating, or would any of the new preservatives be better?"

—1. The subject of stone preservation is dealt with in most books on building materials, notably "The Geology of Building Stones," by J. Allen Howe, and "The Chemistry of Building Materials," by Alan Munby. The "Journal of the Royal Society of Arts," for December 30, 1921, contains a paper on "The Preservation of Stone," by Noel Heaton. 2. We should recommend Portland cement in preference to mastic, only care should be taken not to have the cement too strong to ensure good adhesion. It should not be stronger than one part of cement to five of sharp clean sand, and the stone should be cleaned and thoroughly wetted before treatment with the cement; the use of foundry sand for the purpose is scarcely advisable. 3. Dressing with linseed oil is certainly an efficient method of preservation, provided the darkening of the stone is not an objection; but we should recommend for preference, as more durable than linseed oil, a preparation of China wood oil and resins; this can be obtained from the Protective Products Co., 74 Vicarage Lane, Stratford, E.15.

H. N.

Fixing Glass Fascia Signs.

A. L. writes: "What is the best way to fix glass fascia signs so that the lettering and painted background may be preserved? Less than two years ago we fixed a glass sign with gilt lettering on the back of glass, with a background of ordinary black paint or black japan, and the black paint is rapidly deteriorating and peeling off. We notice a great number of these signs on other premises have gone the same way."

—It is very difficult to state precisely what is the cause of the trouble unless one sees the actual job. From the wording of the enquiry it appears that the defect arises from dampness, and that the back of the fascia has not been sealed properly before fixing. Decorated glass fascias should be protected at the back by a good, sound backboard, covered on the outside with zinc, if in an exposed position, and soundly glazed on the front. On the other hand, it is possible that the backboard may be touching the rear of the written fascia itself. Should this be the case, the contraction of the backboard under the sun's rays and the expansion caused by dampness is quite sufficient to disturb the paintwork and cause the trouble.

A Newcastle Store

New premises have been opened for Messrs. J. T. Parrish, Ltd., in Shields Road, Newcastle, the firm's former shop having been burned down on Peace Day, 1919. The building stands on a site measuring 176 ft. by 55 ft., and is 71 ft. high. In constructing the building 1,100 cubic yards of reinforced concrete have been employed. The store will accommodate 5,000 customers at the same time, and will be staffed by 400 persons. A vacuum cash-carrying system has been installed, the speed of the carriers being twenty miles an hour. The Lord Roberts Memorial Workshops in Newcastle have provided the low-pressure hot-water heating apparatus. The Jesmond Electric Company has fitted a remote central gear so that all the electric lights can be extinguished or put on by a single button.

For the extensive glass-work Messrs. Reed, Millican & Co., Ltd., and Messrs. Atkinson Bros., both of Newcastle, were responsible.

The architects were Messrs. White and Stephenson, Newcastle, and the contractor Mr. W. Thompson, of Ayton Street, Newcastle.

Correspondence

Higher Buildings

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—With regard to the point raised by Mr. W. R. Davidge in your issue for March 22, I should be glad to have an opportunity of explaining the apparent inconsistency to which Mr. Davidge draws attention. It is perfectly correct to state that, among the recommendations of the Building Act Committee of the R.I.B.A., is the following: "That, in the case of the City of London, buildings 120 ft. high, exclusive of two stories in the roof, should be permitted in any street irrespective of its width or date."

It is also true that, as stated by Mr. Davidge, I made the following observations at the meeting on March 6, as reported in the "Institute Journal" of March 25: "It has not been in the mind of anybody who has been discussing this matter seriously that we should build rows of houses 120 ft. in height in streets which are only 20 ft. wide."

The explanation of this apparent inconsistency is that, whilst we have sought for the opportunity of 120 ft. buildings, we have not suggested a wholesale raising, but an occasional raising, in suitable positions, with proper safeguards, where the needs of business demand additional accommodation which cannot be otherwise provided.

This demand has received the support of the City Lands Committee in the following resolution, published in the "Journal" of the Institute on February 11: "That, having heard the deputation, this Committee are in sympathy with the views expressed that buildings in the City of London should be allowed to be erected to a height of 120 ft., with two stories in the roof, subject to the questions of conditions of health and protection from fire being properly considered."

DELISSA JOSEPH, F.R.I.B.A.

Fireplaces and Casement Windows

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I am impelled to write you a congratulatory letter on your excellent issue for March 29, every item in which struck me as of interest, and on somewhat wider lines than usual in the technical press.

I was particularly pleased to have elicited a contribution such as that of Mr. Leask, and if other architects do not respond to my provocation on somewhat similar lines I shall be disappointed. It is by the interchange of such "commonplaces" that we may all benefit.

I can assure Mr. Leask that the little brick fireplace has proved efficient—possibly the fact that the height of the opening is one foot less than in the type he shows may account for the sufficiency of the draught. His type I consider a very good one, and probably with a fire of peat or wood it would be quite satisfactory; but when I used a somewhat similar construction some years ago for coal I found that complaint was made that fine soot collected on the horizontal "baffle" and puffed out at odd and unexpected times into the room. I cannot think that the shaping of throat by easy gathering is so important as he suggests, since the best results in quick draught which I have ever obtained were by a simple appliance called (I think) Gibbs's fireplace lintel, in which the flue aperture was practically a slightly bevelled perforation. I have lost track of this article since the war.

Mr. Leask's wood casement frames on the lines of the simple metal casements with knife-edge strips with which we are all familiar seem to me an excellent idea, and one which I shall certainly adopt.

EDWIN GUNN.

Unification & Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Buckland complains that the views of the Unification Committee have been misrepresented by us. Now for the facts. If Mr. Buckland will refer to the JOURNAL for May 28, 1921, he will find a report of the meeting in question.

Mr. Gibson said: "The one scheme was that all architects who practised architecture or earned their living by it should become members of the Royal Institute."

Mr. McArthur Butler said: "Scheme A which was the bringing of all architects in the kingdom into the R.I.B.A. That means what it said." "Even if they had all the architects of the kingdom in the Institute," etc.

The chairman said: "The only question before us at the moment is the principle of bringing all the architects in the United Kingdom into the Institute."

Sir Charles Ruthen said: "He took it that the idea of Unification was that all architects should belong to the Royal Institute." "They would all be members of the Royal Institute." "The allied societies would not be affected by Unification except in so far that those of their members who were not now members of the Institute would become so."

Mr. G. C. Lawrence: "I understand Mr. Corlette's motion to mean that this meeting is to say that it is much to be desired that all architects should be members of one body—the Royal Institute." The chairman then submitted Major Corlette's resolution to admit "all the architects of the United Kingdom into membership of the R.I.B.A." and it was carried.

We submit we have not misrepresented those gentlemen, we have simply given them credit for having sufficient intelligence to accurately express their thoughts in words.

Such a scheme as explained above could have claimed to be called one for Unification. But it must soon have been apparent to the promoters of it that the R.I.B.A. would never sanction such a proposal, so they "hedged," and stated that "all the architects" only meant all the qualified, or selected, or approved architects, and no others; and to call such a scheme Unification, is nothing less than a piece of impudence and an insult to our intelligence.

The scheme of the Unification Registration Committee was submi to the Parliamentary agents by u was explained at length, and they pressed for an opinion as to the ch of our obtaining Registration if we ca out the scheme, with the well-kn result. We have always maintained the opinion of architects on this tech matter is not worth considering, an architects to say the scheme is a " step" to Registration in order to men to think that if we suspended examination system and admitted in large numbers it would lea Registration, is not worthy of our Co or any member of it.

With regard to obtaining Registra we gave an alternative scheme on pa of the pamphlet issued by the Leagu

Thank goodness members of the I tute are beginning to think and ac themselves and not simply submi any proposal that may be passed majority on the council. We hope Buckland and his friends will writ you again; that type of letter is just we want.

A. W. S. CROSS,
H. D. SEARLES-WOO
Vice-Presidents, R.I.B.
GEORGE HUBBARD,
SYDNEY PERKS,
Hon. Secs. R.I.B.A. Defence Lea

Composition Floors

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The reiteration by the co butor in your issue for March 22 o conditions essential to success in laying of magnesite floors will be he to those whose duty it is to supervise operations. Greater stress might, advantage, have been given to the to ensure the thorough dryness of concrete surface which has to re magnesite compositions, for they adversely affected by the least dam in the foundations.

Even experienced floor-layers sometimes a very inadequate idea of constitutes the necessary dryness, a "test" which is commonly employ to strike a match on the surface. ignites it is deemed to be sufficiently This is a futile test, because evapor often dries the surface of exposed crete, even when the material under is damp. When the surface is covere the magnesite, and this moisture ca escape except by absorption int composition of the floor finish, the sequences may be (and often are) astrous.

The ordinary type of solid constru for ground floors, which depends up layer of hardcore ("brick rubbis often the literally true description keep the earth from communicatin dampness to the concrete, is not a base upon which to lay magnesite flo In recognition of this a number o firms specializing in jointless floor commend that the concrete be fin with a floating of waterproofed ceme receive the composition.

The waterproofing of such floors h been achieved in this way, the point

hether the hardcore underfill may
ted with safety. A layer of hard-
at best, a very inefficient protec-
om damp. It is also costly in a
sense, because a good deal of the
e subsequently laid upon it falls
e interstices.
s been suggested that the hardcore
a heat insulating medium and pre-
he warmth of the room (and of the
nts' feet) from escaping earthwards.
ue in that respect would not, how-
em to be equal to that of the mag-
looring itself, which, when properly
an excellent non-conductor.
her assertion made is that this
f hardcore acts as a sort of safety
and permits any expansion of the
ing soil to vent itself without dis-
ce and consequent damage to the
e floor. As the subsoil of the
g site is usually drained by the
s that have been dug for wall
tions and only loosely refilled, and
ddition, the building itself prevents
ess of moisture (except upon water-
sites), the risk of its expansion
almost as remote as the capability
hardcore to provide for it.
ould be a useful contribution to
neral knowledge if some of your
al readers would state whether
ad found in practice that the pro-
of a layer of hardcore under the
e floors which are waterproofed
rising dampness has any advan-
tage other than that of convenience in filling up existing irregularities with a less expensive material than concrete.

L. E. WALKER.

Houses for £400

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In a statement widely circulated in the press, Sir Kingsley Wood, M.P., is reported to have said at a meeting which he addressed on March 29 that the cost per house had been reduced by one-half, and that tenders were being received at the Ministry of Health at less than £400 for a house of three bedrooms, parlour, and kitchen, and that it was expected that tenders would be still lower.

Will Sir Kingsley Wood go a little further and state where these houses are to be erected, of what materials they are to be built, and by whom, and whether they conform in all respects with the regulations of the Ministry of Health for the houses of the working classes ?

My reason for asking this question is that architects' potential clients, reading the statement referred to, believe that it applies to the whole country, whereas in some districts, and probably in many, it is, I suggest, impossible to get houses of that accommodation properly built at the price quoted by Sir Kingsley Wood.

C. MCARTHUR BUTLER,
Secretary of the Society of Architects.

ERCY THOMAS, O.B.E., F.R.I.B.A., NEW PRESIDENT OF THE SOUTH WALES I.A.

The New President of the South Wales I.A.

Mr. Percy Thomas, O.B.E., F.R.I.B.A., of Dene Lodge, Cathedral Road, Cardiff (partner in the firm of Ivor Jones and Percy Thomas, 5 and 7 St. John's Square, Cardiff), was on March 30 elected President of the South Wales Institute of Architects.

Although Mr. Thomas is a young man —he is only 38—he has already had an interesting and distinguished career. During the period of his pupilage with Mr. E. H. Bruton, F.R.I.B.A., of Cardiff, he won the first prize for architecture in the National Eisteddfod.

On the completion of his articles, Mr. Thomas spent several years in well-known Lancashire offices, and while in Manchester prepared the design for the Cardiff Technical College, which he submitted in conjunction with Mr. Ivor Jones, of Cardiff, in the competition for that building. The design was placed first by the assessor, and Messrs. Ivor Jones and Percy Thomas were appointed architects for the building. Among Mr. Percy Thomas's successes in open competition may be mentioned the first places obtained in the Cardiff Technical College, Merthyr Y.M.C.A., and second places in Pontypridd Y.M.C.A. and Cardiff Fire Station.

In the important open competition for the new Board of Trade Offices, Messrs. Percy Thomas, E. Prestwich, and I. Jones were successful in being among the ten architects selected for the final competition, an honour shared with only one other provincial firm.

In conjunction with his partner, Mr. Percy Thomas has carried out many well-known local buildings, amongst which may be mentioned the Technical College, Cathays Park; Louis Café and Hallinan's Restaurant, Duke Street; alterations to Dowlais Chambers; Park Buildings; Guest, Keen, and Nettlefold's Offices, Docks, Cardiff; alterations to Brain's Brewery, Cardiff, and numerous hotels in Cardiff and district; "The Quarry," Fairwater, and several private houses in Penarth; and the new building of the Sir Edward Nicholl Homes, now approaching completion at Penylan.

Mr. Thomas is a brilliant draughtsman. His pen-and-ink sketches have been exhibited at the Royal Academy, while his well-known ability as a designer is in some measure due to special studies he has made of Greek architecture.

The new president is a great force in architectural education in Wales. He has always been a friend of the young student, and for some time did much valuable work in connection with the Design Club of the South Wales Institute. When the new Department of Architecture and Civic Design was started at the Technical College, Cardiff, Mr. Percy Thomas was made a member of the Advisory Committee, on which his counsels are highly valued. The educational activities of the Cardiff Branch of the South Wales Institute were then merged into those of the new School of Architecture, and the kindly advice and assistance given by Mr. Thomas are highly appreciated by the students and the staff of the school.

Mr. Percy Thomas joined the Artists' Rifles in 1915 as a private, obtained a commission in the Royal Engineers, and

went to France in 1916 with a Field Company of that regiment. He saw service on the Somme, Vimy Ridge, etc., and was appointed Staff Officer to the Chief Engineer of the XIII Corps. Mr. Thomas was twice mentioned in dispatches and was awarded the Military O.B.E.

No election to the presidency of the South Wales Institute could possibly have been more popular among the members than that of Mr. Percy Thomas.

R.I.B.A. Council Meeting

The following notes are from the minutes of the last R.I.B.A. Council meeting :—

The Civic Survey of Greater London.—It was decide to approach the London County Council and endeavour to arrange for the continuance of the work of the Civic Survey for Greater London as a means for providing employment for architects during the present period of depression.

The Metropolitan Water Board.—Mr. H. W. Burrows, A.R.I.B.A., was appointed as representative of the Royal Institute to confer with a sub-committee of the Water Board on the revision of the regulations for the prevention of waste, misuse, undue consumption, or contamination of water.

The Royal Institute of the Architects of Western Australia Incorporated.—The amended constitution of this allied society carrying with it the use of the title "Royal" was approved under the provisions of by-law 79.

The Building Trades' Parliament.—Mr. H. D. Searles-Wood was appointed to represent the Royal Institute on the Building Trades' Parliament.

Membership.—The applications of ten candidates for the Fellowship and twenty four candidates for the Associateship were approved.

Reinstatement. — Mr. C. F. Ward, F.R.I.B.A. and Mr. J. Hardwick Higgs, Licentiate R.I.B.A. were reinstated.

Reading Society of Architects : Annual Meeting

The second annual meeting of the Reading Society of Architects, which is the Berkshire Branch of the Berks, Bucks, and Oxon Architectural Association, was held, by kind permission of the college authorities, at University College, Reading, on March 29, when there was a good attendance of members and friends, including : The Mayor of Reading (Mr. W. Roland Howell, F.R.I.B.A.); the Mayoress and Miss Howell; Mr. Chas. Steward Smith, F.R.I.B.A. (Chairman of the Executive Committee); Mr. Allan W. Seaby; Mr. W. Galt Millar, F.S.I.; Miss A. M. Bradley; Mr. and Mrs. W. H. Pountney; Mr. J. T. Saunders, F.R.I.B.A.; Miss Wilson; and Messrs. C. B. Willcocks, F.R.I.B.A.; H. Hutt, A.R.I.B.A.; J. R. Greenaway, F.S.I.; Herbert Maryon; F. A. Woods, A.R.I.B.A.; H. T. Morley; F. Sainsbury, M.S.A.; W. J. Freeman, A.R.I.B.A.; H. W. Rogerson, M.S.A.; W. W. Roberts; E. S. Smith; A. T. Doe; W. Allen; R. J. Carter; A. H. Powell; D. Skurray; W. K. Laurie; F. G. Goodin; P. G. Carter; S. E. Burrett (Secretary), etc.

The chair was taken by Mr. Chas. Steward Smith, who, in a brief report on the recent work of the Society, mentioned that the membership now consisted of eighty-four members and ten honorary members.

On November 2, 1921, the Society paid a visit to Messrs. Samuel Elliott and Son's Caversham Joinery Works. The party consisted of about thirty members, who spent a very interesting two and a half hours inspecting the different shops.

Members of the Society have also on several occasions taken part in visits and attended lectures arranged by the Berks Archæological Society, with which the Reading Society of Architects is affiliated.

In connection with this branch of the Society's activities arrangements have been made to keep a record of measured drawings and illustrations of historical and interesting old buildings in Berkshire and surrounding districts. To make the record as complete as possible, members have been invited to send to the Hon. Librarian, Mr. H. Whiteman Rising, 154 Friar Street, Reading, particulars of any suitable measured drawings or illustrations they possess, or any of whose existence they are aware in private collections, with particulars of where the drawings can be inspected, and, when possible, notes of any books or records containing accounts of the building.

Members have also been asked to send to Mr. Rising particulars of any old buildings of which it would be advisable to have measured drawings prepared and photos taken for record purposes, especially those which are likely to be demolished shortly, so that a record can be obtained before they are destroyed.

It is proposed to prepare a list of buildings of which measured drawings are required, when the Society will offer special prizes for measured drawings of these buildings.

In conjunction with this scheme the local authorities have arranged for photographs to be taken of interesting buildings in Reading which are threatened with destruction.

A class in architectural design has been started at Reading College, with an attendance of thirteen students.

After the Chairman's report the Executive Committee for 1922 was elected, consisting of :—

Chairman : Mr. W. Roland Howell, F.R.I.B.A.; Vice-Chairman : Mr. Chas. Steward Smith, F.R.I.B.A.; Hon. Librarian : Mr. H. Whiteman Rising, F.R.I.B.A.; Hon. Treasurer : Mr. J. H. Goodman; Hon. Secretary : Mr. C. B. Willcocks, F.R.I.B.A.; Members : Messrs. W. Galt Millar, F.S.I.; W. R. Morris; T. T. Cumming, A.R.I.B.A., and W. J. Freeman, A.R.I.B.A.

Mr. Chas. Steward Smith then vacated the chair, and his place was taken by the new Chairman, Mr. W. Roland Howell, who, after thanking the members for his election, shortly reviewed the work of the Society since its formation, and congratulated the Society on its rapid growth. Mr. Howell also specially drew the attention of those present to an architectural exhibition it is proposed to hold in the Art Gallery during the first fortnight in July, when the R.I.B.A. Prize Drawings will be on exhibition, together with a selection of the British Prix de Rome drawings and photos, and drawings of the works of members of the Berks, Bucks, and Oxon Architectural Association their Associated Craftsmen.

In connection with the exhibi several popular public lectures on a tecture will be arranged.

The following architects were elected to represent the Reading Sc of Architects on the Council of the B Bucks, and Oxon Architectural Ass tion : Messrs. W. Roland Ho F.R.I.B.A.; F. H. Floyd, F.R.I (Newbury); C. B. Willcocks, F.R.I. F. Woods, A.R.I.B.A. (Maidenhead) F. Sainsbury, M.S.A. Mr. Chas. Ste Smith, F.R.I.B.A., was nominated election as Vice-President of the B Bucks, and Oxon Architectural Ass tion.

Mr. A. W. Seaby, member of Society of Graphic Art, etc., then ga address on "Design in Industrial Ar

After tea Mr. Chas. Steward Smith Mr. Hutt, the architects for the library at University College no course of erection, showed membe the Society and their friends round new building, which is designed spacious lines, and when completed be both architecturally and practi most important and valuable add to the college.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIV

Hoxton Clearance Scheme.

In the House of Commons Sir A. M Minister of Health, said that his de ment had under consideration a sch submitted by the London County Co under Part I of the Housing of the W ing Classes Act, 1890, with referenc an area of nine acres, including Street, Hoxton. The proposal wa clear the area by stages and to erect blocks of dwellings for the wo classes.

Aberdare Housing Scheme.

Replying to Mr. Stanton, the right gentleman said that he had alr caused a special investigation to be m into the progress and cost of the Aber Housing scheme. The inspector's re was now under consideration.

Housing Progress.

Sir A. Mond informed Mr. N. Ma that the housing schemes of local aut ties and the builders' subsidy scheme vided for 218,000 houses. Of t 120,000 had already been comple There remained some 98,000 to be finis and he hoped that a large propo would be completed during the co year.

L.C.C. Housing.

Replying to other questions, Si Mond said that the approval origi given to the proposal of the Lo County Council to build 29,000 dwellings in the course of five years withdrawn last June, when the Go ment decided that, owing to the u need for reducing national expendi the number of houses to be erecte local authorities in England and W with State assistance under the pr scheme must be limited. Of the h which the London County Council been authorized to build, over 5,200 in building on March 1, and some had not yet been started. They therefore, a very considerable progra still in hand.

The Building Exhibition

(Social Arrangements.)

hitects' Welcome Club

"Architects' Welcome Club," in inces Room, has been organized by .I.B.A., the Society of Architects, he Architectural Association, for nefit of architects and their friends g the exhibition. The organization club is of great practical use to archi- particularly those from the pro- who attend the exhibition for the se of studying the latest develop- in building methods and materials. accommodation at the club will e two club-rooms, where news- s and technical journals will be ble for reference, and light refresh- will be obtainable at tariff charges. will also be a President's Room, n enquiry office where an official entative of the club will be in lance daily.

Friday, April 21, at 3 p.m., a re- n will be held in the Pillar Hall by Presidents and Councils of the .A., the Society of Architects, and rchitectural Association to archi- and their friends. At 6.30 p.m. for a banquet will be held in the Hall, where representatives of the .A., the Society of Architects, and the Architectural Association, kindred professions, public bodies, the building industry, Government departments, and foreign architects will be the guests of the Club. Tickets, price 12s. 6d., not including wine, may be obtained from the Secretary, R.I.B.A., and, during the exhibition, at the club, by architects and their friends, including ladies, exhibitors, and any others who may desire to attend. Mr. Paul Waterhouse, P.R.I.B.A., will occupy the chair.

Other arrangements made by the Architects' Welcome Club include public lectures on the following dates :

Wednesday, April 19, at 6.30 p.m. : "Old St. Paul's and other Cathedrals." By Mr. Herbert A. Cox. Chairman : Sir Lawrence Weaver, K.B.E.

Thursday, April 20, at 6 p.m. : "The Englishman's House; a talk to people who know nothing of Architectture." By Mr. Nathaniel Lloyd, O.B.E. Chairman : Lord Leverhulme.

Monday, April 24, at 6 p.m. : "What we mean by Town Planning." By Professor Patrick Abercrombie, F.R.I.B.A.

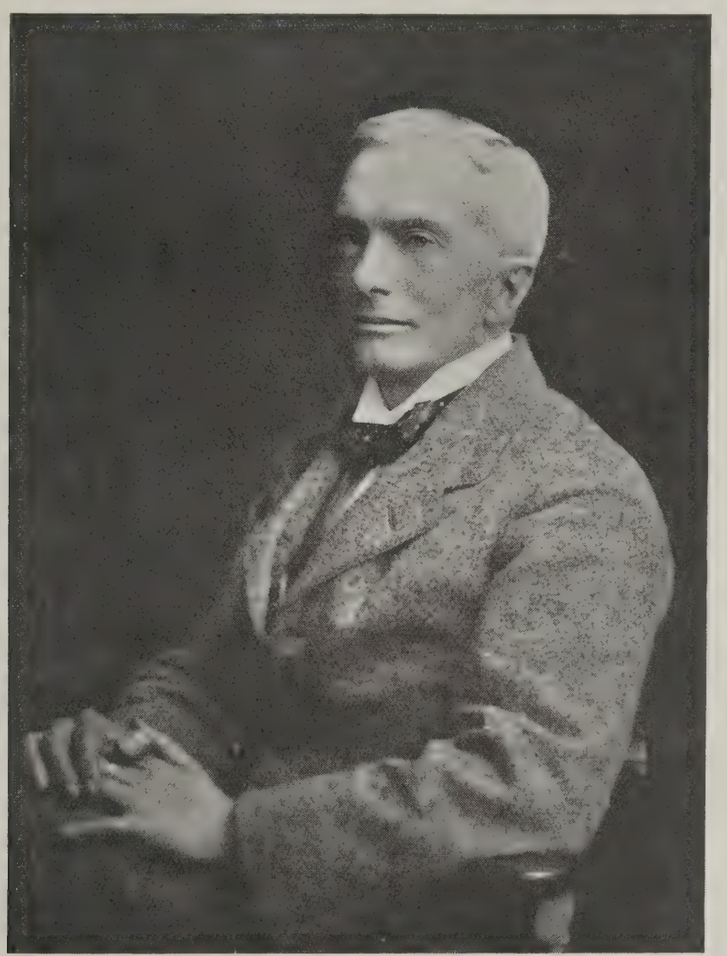
Wednesday, April 26, at 6 p.m. : "Modern Domestic Architecture; Fashion and Style." By Sir Lawrence Weaver, K.B.E.

These lectures have been arranged for members of the public exhibiting at or visiting the exhibition, to interest them in architecture and building, and it is hoped that architects will do their best to make the lectures widely known.

There will be an exhibition of cinematograph films, open to the public, illustrating various building and manufacturing processes, every evening at 7.45 in the Large Conference Hall.

Complimentary season tickets of admission to the exhibition may be obtained from the Secretary, R.I.B.A. Cards of invitation to, or tickets for, any of the social functions or lectures will admit the holders to the exhibition on the day for which the invitation or ticket is issued.

Through the generosity of the organizers of the exhibition an arrangement has been made by which special admission tickets to the exhibition are being distributed to architects for the benefit of the funds of the Architects' Benevolent Society. The use of each of these tickets by an architect results in the payment of the cost of admission (1s.) to the Architects' Benevolent Society. Architects can obtain these tickets by applying to the Secretary, R.I.B.A.



MR. PAUL WATERHOUSE, P.R.I.B.A., WHO OPENED THE EXHIBITION YESTERDAY.

Architects' Olympian Night

An "Architects' Olympian Night," organized by the Architectural Association, will be held on Friday, April 21, 1922, in the Conference Hall, Olympia, which will be specially decorated. There will be a carnival procession, "Brighter Building," through Olympia at 9 p.m., and dancing will take place from 9.30 p.m. to 5 a.m. All proceeds will go to the Architectural Association Endowment Fund. Tickets, including refreshments: Single, £1 1s.; double (lady and gentleman), £1 15s.; to be obtained from Mr. F. R. Yerbury, Secretary, The Architectural Association, 34, 35, and 36 Bedford Square, W.C.1.

The Concrete Institute

During the whole period of the exhibition the Council has arranged for members of the Concrete Institute to have the use of a sitting room, which will be situate over the main entrance. The secretary of the Institute will be present in the Concrete Institute's room every afternoon and evening from 3 o'clock onwards, and will be pleased to welcome members and to afford them any assistance they may require. The sitting room will also be available for the use of friends of members.

DESIGN FOR THE A.A. CARNIVAL AT OLYMPIA.

A series of discussions will be held in the small Conference Hall (over the main entrance) each day from April 18–21, inclusive, commencing at 5.30 p.m., and it is hoped that as many members as possible will attend. Each discussion will be opened by a short paper, and the subject will then be open for free discussion, in which members and visi attending are expected to take part.

The secretary has for disposal a limited number of complimentary se tickets for the exhibition, but mem should not apply for these unless intend visiting the exhibition d Complimentary tickets of admissio the exhibition for any of the single upon which the discussions are b held may also be obtained from Secretary, Denison House, 296 Vaux Bridge Road, S.W.1.

The following programme of dis sions to be opened by the gentle mentioned on problems of the mon has been arranged: —

Tuesday, April 18 (5.30 p.m.): "Training the Concretor"; (*b*) "Re Developments in the Industry." Mr Fiander Etchells, A.-M.Inst.C.E., (President).

Wednesday, April 19 (5.30 p.m (*a*) "Concrete Roads"; (*b*) "Use of forced concrete in highway bridg Dr. Oscar Faber, O.B.E.

Thursday, April 20 (5.30 p.m.): "W life can be assigned to works of reinfo concrete for the purpose of Governm loans?" Mr. G. C. Workman, M.S.

Friday, April 21 (5.30 p.m.): (*a*) "(crete block building"; (*b*) "Reinfo floors"; (*c*) "Use of pre-cast worl building structures." Mr. E. S. Andr B.Sc.

Notes on Some of the Exhibits

Cement, Concrete, and Reinforced Concrete

THE ADAMITE CO., LTD.

"Atlas White" and "Colemanite" can be seen on Stand No. 4a (Messrs. Tidnam's) in the gallery opposite the lift.

Address: Regent House, Regent Street, W.1.

BRITISH REINFORCED CONCRETE ENGINEERING CO., LTD.

Gallery Bays, 1 and 2.

The British Reinforced Concrete Engineering Co., Ltd. exhibit a large number of photographic enlargements illustrating building work and road work in which their system of construction has been used. These photographs cover every description of work, and they are taken from all parts of the country.

Photographs of work abroad are purposely excluded, although large quantities of the company's material are exported for buildings and roads in the Colonies and in foreign countries.

B.R.C. columns consist of plain bars fitted with B.R.C. hoops and helicals, and B.R.C. beams consist of plain bars fitted with B.R.C. grouped stirrups.

The exhibit includes a sample column and a sample beam, the particular feature of the latter is that stirrups are supplied in large units, the portions of each unit being physically connected.

B.R.C. slab reinforcement is the well-known B.R.C. fabric. A sample of this material is shown waved or bent in the manner required in floor reinforcement. A tool has now been perfected for carrying out this waving accurately and economically, and the patent rights are held by the British Reinforced Concrete Engineering Co., Ltd. The use of the tool greatly increases the accuracy of reinforced concrete construction, and saves a large amount of cost to the contractor in fixing floor reinforcement.

The municipal section of the exhibit is represented by a concrete slab showing the use of B.R.C. fabric in road reinforcement.

Address: 1 Dickinson Street, Manchester.

STOTHERT AND PITT, LTD.

Row A, Stand 42.

Here are exhibited the Victoria concrete mixer, driven by electric motor, and fitted with automatic water tank side-loader, the whole mounted on road wheel truck with swivelling fore-carriage; Victoria H.M. mixer, electrically driven, and mounted on wheels fitted with power-operated side-loader; Dri-crete block and slab machines; combined stone-drying and mixing plant for dealing with tar macadam and bituminous mixtures.

Address: Orchard Street, Westminster, S.W.1.

THE CEMENT MARKETING CO., L

Row F, Stand 112.

Selling organization for: The A ciated Portland Cement Manufactu Ltd.; The British Portland Ce Manufacturers, Ltd.; Messrs. M Earle & Co., Ltd.; and The Would Cement Co., Ltd.

This exhibit consists of a wor model of complete Portland cement p and shows samples of the compa well-known brands of Portland ce ground to various degrees of fine Cement at various stages of its man ture, neat and sand briquettes of va ages, and cubes of various mixture testing are exhibited, also aggregat various descriptions, both suitable unsuitable for mixing with Port cement.

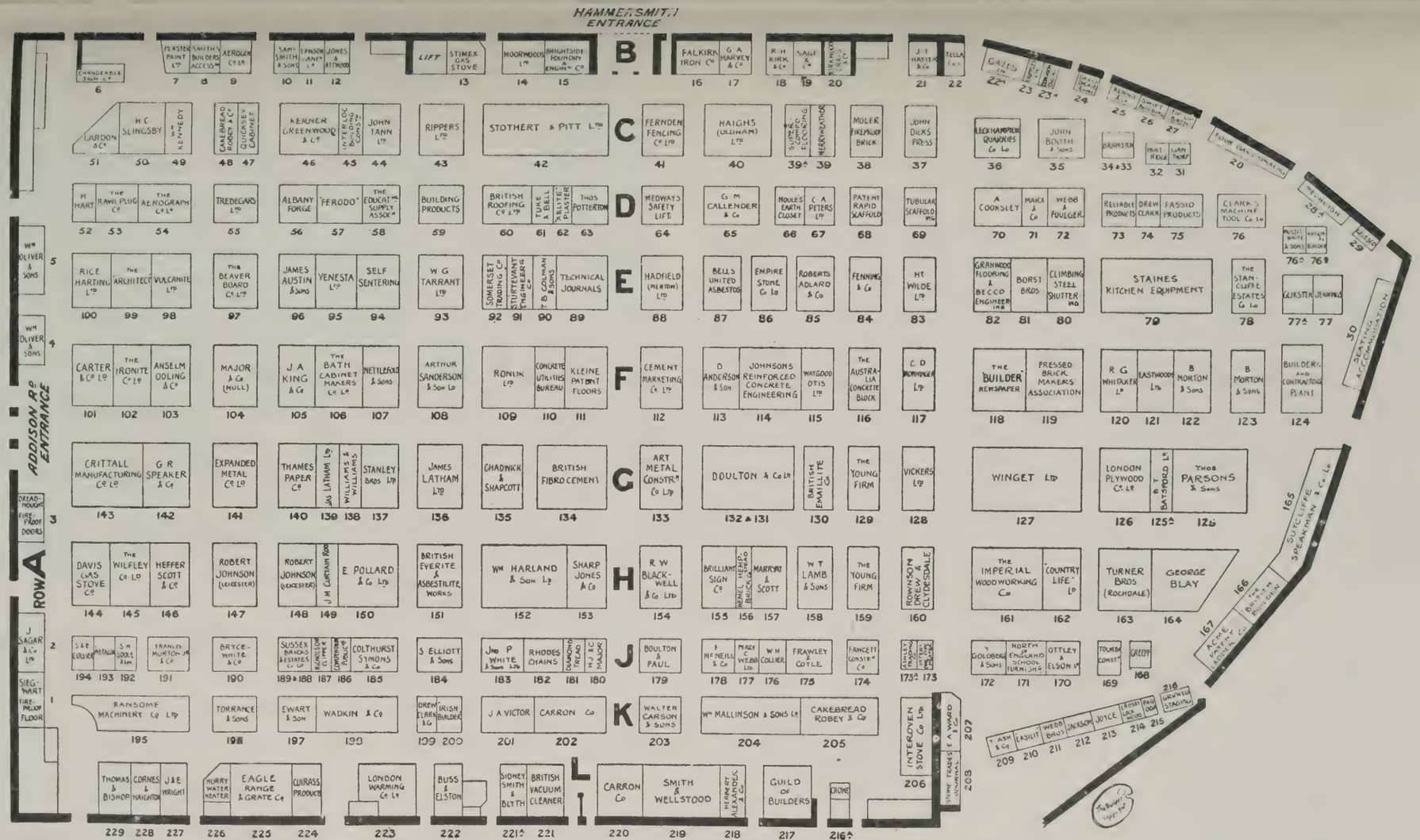
A complete set of testing appa used in connection with revised Bri standard specification is to be noted, practical tests are carried out on stand.

Samples of lime, whiting, supe Keene's and Parian cements ma found on the stand, and a simple ap tus for ascertaining the proportio cement, sand, and coarse mat necessary to obtain dense concre worthy of attention.

"Everyday Uses of Portland Cem a practical handbook on the econo employment of Portland cement, sale at the stand, price 7s. 6d.

Address: 8 Lloyds Avenue, E.C.3.

(*Exhibition Notices continued o page* 556)



THE BUILDING EXHIBITION, OLYMPIA: PLAN OF GROUND FLOOR

(Reproduced by arrangement with "The Builder.")

(*Continued from page* 554.)

WINGET, LTD.

Row G, Stand 127.

Winget Limited, who are specializing in labour-saving plant for builders and contractors, have many novel features on their stand besides the latest types of concrete block machinery. There is a self-loading elevator which will, it is claimed, shift thirty tons of loose material an hour at a fraction of the cost of manual labour. In addition to a small portable belt-conveyor, handling material of every description in bulk or package, a larger and more powerful machine of the same type is shown. Three sizes of these belt-conveyors—one with fixed and the others with adjustable booms—are now supplied by Messrs. Winget, fitted with electric or petrol drive, and capable of loading or unloading up to seventy tons an hour.

On the "Winget" stand is also demonstrated the "Nonalike" method of concrete block construction, which is being used in the Liverpool Corporation's direct labour housing scheme, as well as at Welwyn and elsewhere. The stand also includes the newest types of block-making machines at greatly reduced prices, together with crushers and clinker crushing rolls—the latter another addition to the "Winget" plant, capable of reducing 6 to 7 cubic yards clinker to ¼ in. and under per hour—as well as the latest types of mixers both for wet and semi-wet concrete.

Address : Winget House, 24 Grosvenor Gardens, Westminster, S.W.1.

Iron and Steel Fittings.

THE ART METAL EQUIPMENT COMPANY, LTD.

Row G, Stand 133.

The display of the above firm is intended to show how all the necessary fittings for a building can be made in steel.

Steelwork, it is claimed, protects property from fire, saves twenty per cent. of space over wood, is clean, does not warp or crack, and is easily packed for transit. It can be finished in plain stove enamel or grained to match any existing wood, or embellished with bronze ornamentation.

Steel doors can be constructed either hollow or of solid steel plate, and can be made perfectly plain or ornamented with mouldings.

Rolling shutters fulfil the requirements of a fire-resisting door which takes up no space; and where space is valuable the extra initial expense is compensated for by the extra area obtained. All the rolling shutters made by this firm work on ball bearings, and where gearing is necessary it is machine-cut, thus giving rapid and easy operation.

Filing cabinets, both for quarto and foolscap, are shown, with and without general locks; protection against fire is obtained by the double drawer heads and double walls forming an air space on all sides.

Library stacks as fitted to many of the large London, provincial, and foreign libraries are also on view, and the increased capacity that can be obtained, and the quick adjustment of the steel shelves, should make a striking appeal to librarians.

A steel desk occupies the centre of the stand, and shows the adaptability of modern steel construction to this type of office furniture. Steel doors of several types are exhibited, and further exhibits include a pair of the latest double-geared fire-resisting shutters, and a motor-operated shutter.

Address : 186–188 Shaftesbury Avenue, W.C.2.

JOHN BOOTH AND SONS.

Row C, Stand 35.

This stand is an original and artistic achievement, and is designed to be of practical interest to architects, builders, and all proprietors of works, warehouses, and large buildings.

The construction of the stand demonstrates the utility of structural steelwork, and its adaptability to architectural design, being a steel structure with stanchions encased in wood columns of the Doric order.

The roof is an exact half-size model of the Booth's Warren-girder roofs, representing Warren girders 50 ft. span, spaced 20 ft. apart, complete with valley girders and intermediate trusses.

Two bays are glazed with Hope's patent glazing, one bay covered with boards and felt, and with Booth's pressed "rustless iron" gutters.

These Warren-girder roofs combine, it is claimed, perfect lighting, maximum floor space, and facilities for driving from roof, and it is noteworthy that they have been used at the Dunlop Rubber Company's new sheds and mills at Castleton, covering an area of 40,000 square yards.

A "true-to-scale" model, one-eighth size, of a Warren-girder roof, is also sho which gives visitors an excellent op tunity of inspecting the details of struction and methods of flashing.

Messrs. Booth are also exhibiting t steel fireproof doors, both sliding, hir single and hinged folding, which h not only been tested and approved the Fire Offices' Committee but have been proved to be fireproof through actual fires in various parts of the coun

The small office on the stand is structed with Booth's steel and partitions. These are extensively in cotton mills, warehouses, boiler hou and wherever large rooms are to divided or portions screened off.

Addresses: Hulton Steelworks, Bol Queen Anne's Chambers, Westminste

CRITTALL MANUFACTURING LTD.

Row G, Stand 143.

A complete range of the well-kn window products of this firm is sho including windows suitable for pra ally any class of building. The winc themselves show many innovation design, including bronze threshold p and special fasteners for folding doo

Amongst the novelties included in exhibit is a new design of shutter fo in conjunction with metal windows which the slats are of teak, place metal frames, thus overcoming the culty of shrinkage in the woodwor the same time avoiding the objectio steel slats, which become overheate tropical countries.

Another interesting feature is Fenestra panelling, consisting of the a cation of various kinds of wood sla

STAND OF THE CRITTALL MANUFACTURING COMPANY, LTD.

frames. This may be used either
ll covering (and as such is certainly
ul development of the old-fashioned
ork) or as a partition, in which
e wood may be replaced either by
s for fire-resisting purposes, or by
f various kinds where the problem
nination has to be considered.
ngst other interesting exhibits on
and are various types of bronze
which this firm are now making
New London County Hall to the
of Messrs. Knott and Collins. The
Manufacturing Company have
y directed their attention to work
nature, and this particular exhibit
od specimen of such work.
ess: Braintree, Essex.

TTLEFOLD AND SONS, LTD.

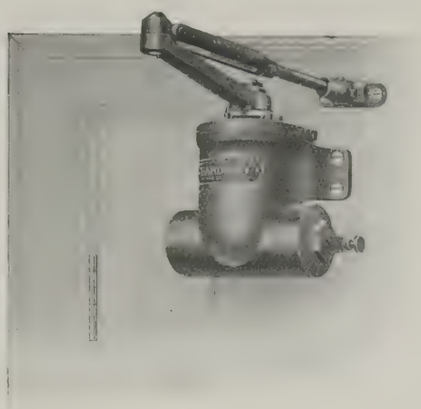
Row F, Stand 107.

rs. Nettlefold and Sons, Ltd. are
g at their stand their Bardsley
oil door check and spring. They
o showing doors fitted with their
ball hinge, which is a unique
tion of the principle of ball bearing
hanging of doors. The firm have
ted contracts for the supply of
for a large number of housing
s of all kinds, and are fully
ed to deal with any proposition of
d that may be submitted to them.
s of patterns as supplied to the
.S., the L.C.C., and a number of
authorities are shown on their
A new tool which will be found
to builders and joiners in many
stances is a patent abrasive tape
which is shown here for the first
By an ingenious application of
dge principle, a strip of abrasive
held very firmly, while at the same
is only a matter of moments to
ute a fresh strip when the old one
d out.
dress: 54 High Holborn, W.C.1.

JOHN TANN, LTD.

Row C, Stand 44.

ng-room doors, from the comparatively
light book-room door for fire risks
o the strongest burglar and fire-
g bullion vault bankers' door, are
ef exhibits of this company, which
oldest-established firm of safe
acturers in the world. The thief-
g doors are equipped with their
anti-explosive and anti-blowpipe
s. By these unique devices an
atic mechanism comes into opera-
s a result of any attack on these
by high explosives, by the oxy-
ne blowpipe, or by similar means.
nechanism holds the door secure
f the locks are entirely destroyed
above means or by a combination
se with other methods of attack.
devices have been tested and certi-
the British Oxygen Company and
. Curtis and Harvey, Ltd., and
all cases resisted attacks by bur-
Included in this section of the
are also party-wall doors, plate
doors, strong-room grilles, ventila-
nd also adjustable steel shelving
ple yet rigid construction. Deed-
locks, etc., are also shown.
safes exhibited are very high-grade
clude John Tann's patent crane-
"Invulnerable" safe, of which a
raph is here shown. This safe is



BARDSLEY OIL DOOR CHECK AND SPRING.
(NETTLEFOLD AND SONS, LTD.)

"the last word" in scientific protection against fire and burglars, and is constructed to resist every known risk and form of attack. The "Dreadnought" quality branch bank safe, as supplied in large numbers to the leading banks, shows how the interior of a safe may be utilized to the best advantage, and is also an example of a high-grade workmanship which is the key-note of this firm. There is also a fine range of book safes for general office use. The technical staff of John Tann, Ltd., is always at the service of architects and builders for any information or advice which may be desired in connection with any form of security installation.

Address: 117 Newgate Street, London, E.C.1.

Roofs and Partitions

D. ANDERSON AND SON, LTD.

Row F, Stand 113.

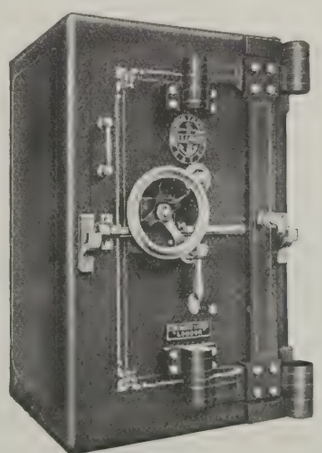
This exhibit comprises all classes of the well-known "Red Hand" brand of roofing, sarking, and lining felts, damp-courses, also "Rok," "Stoniflex," and "Hippo" roofings.

The special exhibits consist of a model "Belfast" lattice girder roof, covered with "Rok" roofing.

A model shows a concrete roof reinforced with "Rok" roofing, and a further model illustrating Anderson's system of flat roofing may also be seen, and a small wooden hut with a sloping roof covered with "Hippo" roofing demonstrates the uses of the latter as a cheap ready roofing for all temporary buildings.

Wood fencing is exhibited treated with "Sidol" (Sideroleum)—the well-known wood preservative, and "Ferro-rok" corrugated sheets are a further feature of the stand.

Address: Roach Road Works, Old Ford, London, E.3; Lagan Felt Works, Belfast; and Park Road Works, Stretford, Manchester.



CRANE-HINGED "INVULNERABLE" SAFE.
(JOHN TANN, LTD.)

BELL'S UNITED ASBESTOS CO.

Row E, Stand 87.

This firm shows a Pavilion demonstrating on the roof the extreme utility and excellent artistic effects produced by the various forms of "Poilite" roofing, namely, "Poilite" standard diagonal tiles, in red, grey, and russet-brown colours; corrugated sheets; pantiles, and Roman tiles.

The sides of the building demonstrate the attractive and permanent use of "Poilite" sheets for this purpose.

The interior of the pavilion shows how the plasterer can be eliminated, and the charming effects which can be obtained both as regards walls and ceilings.

The various other forms in which "Poilite" is available can be seen on the stand, and these will inspire many further uses to which "Poilite" can be applied in the future—particularly in view of its economy and permanence without any upkeep cost.

This is the first occasion Bell's new russet-brown coloured "Poilite" has been exhibited, and diagonal tiles in this artistic colour are a very great advance as regards æsthetic treatment on anything which has been achieved before in asbestos roofing.

The russet-brown pantiles, owing to their texture, effect, and bold shape, offer, in the maker's opinion, such possibilities of picturesque effects as cannot fail to appeal to architects.

Address: Southwark Street, London, S.E.1.

BRITISH FIBROCEMENT WORKS, LTD.

Row G, Stand 134.

The Company is engaged in the manufacture of "Fibrent" asbestos-cement slates and flat and corrugated sheets for all roofing and partition work. The stand has been specially designed to illustrate the many various "Fibrent" asbestos-cement manufactures.

The east slope of the roof is covered with "Fibrent" corrugated sheeting, natural grey colour. The Company were the first to manufacture this material in England, and its perfection is the result of experience. "Fibrent" curved corrugated sheeting has been used to cover the roof over the ventilator. This material can be curved to any required radius, and as shown, is manufactured in colours other than the natural grey. The north slope is covered with "Fibrent" diagonal slates of the red colour, and the west slope of similar pattern slates, but the natural grey colour. "Fibrent" duchess slates, blue-black colour, have been used on the south slope, and are now manufac-

tured for buildings where a straight pattern of slating is preferred to the diagonal. The four roofs of the small tower are covered with "Fibrent" scalloped slates and give a very pleasing appearance to such roofs or over porches and bay windows. These slates are also highly suitable for vertical work in housing, and most effective for preventing damp walls in exposed positions.

The external treatment of the walls and ceilings shows the use alternatively of "Fibrent" flat and corrugated sheets. The west end shows a half-timbered finish. The interior shows the use of flat sheeting and the several finishing methods which are generally adopted. The east walls show the use of "Fibrent" ribbed sheets and the method of fixing with rebatted joint. "Fibrent" flat sheets ½ in. thick are used in the floor, fixed direct to joists, this further illustrating the many uses of "Fibrent" products in modern construction.

Address: Head Office and Works: Erith, Kent.

F. McNEILL & CO., LTD.
Row J, Stand 178.

This firm shows a very wide and interesting selection of various manufactures, including famous roofing felts in all varieties. These are shown in standard length rolls, and also applied to scale models, so that one may see at a glance the best methods of application.

Asphaltic Roofing Felt, of which Messrs. McNeill were the original patentees, and which for nearly a century has been so largely and successfully used, is shown, also Lion Roofing, a high-grade of "rubber-type" roofing. This is manufactured of selected bitumens, which impregnate and coat a fibre base, producing a flexible material of great durability and permanently waterproof. It was used in immense quantities during the war on aircraft buildings, hospitals, hutments, etc. An interesting point in connection with this roofing is that it withstands chemical fumes, and the fact that it is suitable for all climates explains the big overseas demand for it.

Mastic Roofing is a ready tarred and sanded felt made in various thicknesses and suitable for all kinds of roofs, including farm buildings, sheds, outhouses, etc.

"Rooftite" is another high-grade roofing, with a smooth surface, being impregnated with pure bitumen. It is, the makers state, of the greatest durability and waterproof in the highest degree. It contains no coal tar or pitch, and is approved by the Architects' Technical Bureau, as is the case with most of Messrs. McNeill's products.

"Ace" Roofing is, it is claimed, a perfect lightweight roofing. Though light in weight, the carefully selected bitumen coatings render it absolutely waterproof, and at the same time give it great pliability and long life.

"Weathertite" is a high-grade, smooth-surface roofing that makes a strong appeal on account of its high efficiency and very low price.

Roof lining felts are also shown in great variety, and are specially designed to suit various requirements, such as non-conductivity of sound and heat or cold, damp-proofing, etc.

A model building with a flat roof admirably shows McNeill's "Combinite" system of covering flat roofs. This solves many of the troubles that develop in concrete and asphalt roofs, and those who are considering the construction of concrete buildings will find this model of more than passing interest.

An important and attractive feature of McNeill's display is the demonstration by model and flame of the soundproof and fireproof qualities of their "Slagbestos" (or perfected slagwool). The sight of the flocculent white woolly-looking material glowing brightly by the direct action of a bunsen flame without disintegration or damage stops most people who may be passing, and many who are probably long-suffering flat-dwellers are keenly interested in the effective annihilation of sound, as illustrated by the complete "snuffing-out" of the jangle of an electric bell when surrounded by a layer of "Slagbestos."

Concrete specialities are also shown by this old-established firm; amongst these we would mention "Spartanite" for waterproofing, and "Flintesco" for hardening concrete, etc.

Address: Spencer House, 4 South Place, E.C.2.

BRITISH ROOFING CO., LTD.
Row D, Stand 60.

This exhibit shows Alligator asbestic slates, wall and ceiling sheets. The slates are supplied in one standard thickness, and various methods of laying can be adopted. The diagonal style is, however, recommended for economy and efficiency with C pattern slates.

All tiles are sent out ready cut and holed according to the style of roofing and overlap required, and are made in three colours—grey, blue, and red. Alligator wall and ceiling sheets are shown used in various ways, and the decorative effects to be obtained by their use as panelling may be noted. A small roof of corrugated sheets, stated to be acid and chemical proof, fire and rot proof, are also exhibited.

Address: Premier House, 150 Southampton Row, W.C.1.

VULCANITE, LTD.
Row E, Stand 98.

On this stand may be seen a model showing the application of patent Vulcanite roofing to flat roofs of wood construction. The usual Vulcanite roof consists of three layers of Vulcanite mastic, applied hot, and forming one solid, seamless, jointless mass with three sheets of "Vulcanite" asphalted felt.

The result is, it is claimed, a waterproof, fire-resisting, tough, and elastic roof, unaffected by settlement, vibration, or change of temperature. The model shows the type of roof as laid by the firm's workmen in all parts of the country.

Roofings "Leatherite," "Pyramid," "Apex," and "Rexilite" are also shown together with the original vulcanite sanded asphalts shown in rolls and on models.

Many samples of dampcourse are displayed, including the "Reliance" brand, a sheet lead, sealed in bitumen, and protected each side with asphalted felt. Also various weights in "Rexilite" and "Bituna" pure bitumen dampcourses, and the original Vulcanite sanded asphalts.

Specimens showing the use of "S dard" asphalt as a waterproof filling cavity walls are exhibited, as are "Co leum," a damp-proof underlining carpets and floor cloth, "Vulcan carpet felt, and other specialities insulating, waterproofing, sarking, lining.

Address: Blackfriars House, Bridge Street, London, E.C.4.

Floors and Staircases

SIEGWART FIREPROOF FLOO COMPANY, LTD.
Row A, Stand 1.

Various sections of the well-kn fireproof floors constructed by the may be seen on this stand, the exhibit showing a floor with a spa 12 ft.

The simplicity of the construction the ease in laying will be readily from the specimen floor shown.

The Siegwart floor requires absol no centering during construction, an inspection of the spans shown demonstrate this.

It is claimed that, owing to the construction of the Siegwart floor, siderable saving in the cost of st structure can be effected, lighter sect of supporting girders and stanch being required.

Address: Thanet House, 231 St (opposite Law Courts), London, W.

THE WILFLEY CO., LTD.
Row H, Stand 145.

The exhibit comprises a Marb floor actually laid, showing various ders and designs in different colours. concave skirting formed round the it is demonstrated how all sharp a are avoided. By this means it is st to be impossible for dust or dirt to co and cleaning is rendered both easy efficient.

In addition a section of Marboli shown which was taken from the pre of Messrs. Kolynos Incp., Alder Street, E.C., after a fire which occ there in July last year. The fire b out in the basement, and Marbolith laid on the existing boards of the gr floor. While both the joists and bo were burnt through, the Marbolith was not affected in any way, and only broken through by the heavy w of machinery upon it. While the ment of the building was entirely gu it was quite evident that the rema of the building was saved by the resisting properties of Marbolith.

Address: Salisbury House, Lo Wall, E.C.

FERODO, LTD.
Row D, Stand 57.

This firm exhibits specimens of Ferodo patent stair treads and Fero nosings. Many fatal accidents annually through people slipping worn, wet, and dangerous stairs, and result in costly litigation. Ferodo p stair treads, which possess the fricti properties that have made Ferodic tion linings famous for lining brakes clutches, grip the sole of the boo firmly that slipping is claimed to b possible. They are manufacture

ypes, three colours, and in two sses. They are made of specially otton, and bonded by the Ferodo of bonding, which gives them the ty of iron. The makers state that ip equally firmly, when first put and when worn to a thinness of of paper, being of the same throughout, and they are supplied ps of any size in wood, stone, iron, ole. Other specialities shown in- Feroleum nosings, Ferodo stair- ressing, which can be applied to suitable for cinemas and theatres, loeum fibrous flooring, which can ined in seven colours, either plain igated.

ess: Sovereign Mills, Chapel-en- .

Joinery

ULTON AND PAUL, LTD., NORWICH.

Row J, Stand 179.

ry, consisting of a variety of windows, mantels, and office fur- is exhibited, with a new patent elevator, which is specially l for domestic or farm use, and is useful for water or semi-liquids. struction is simple and unaffected t; water can be raised from deep low wells, and the whole fixing done at the well head.

ess: 135–137 Queen Victoria E.C.4.

ATH CABINET MAKERS CO., LTD.

Row F, Stand 106.

exhibit shows a portion of an elled room in the late seventeenth- style, and includes a mantelpiece l with carvings executed in lime- In some of the panels are displayed examples of needlework designed style of the period. Within the re displayed samples of furniture ous styles, exhibited as choice es of the cabinet-maker's art. f the chairs and stools are covered lework and embroidery executed sts and craftworkers in the com- studios. The electric fittings and ppointments are also executed by npany, some of them being of wood, polished and coloured ne, and then covered in fine ork. Upon this stand is also d wood panelling in various f woods, and some carefully de- wood chimneypieces. Worthy of an example of wall panelling show- ings of Greek influence and suit- r present-day schemes of decora- An important panel of painted shows another branch of this ctivities, and is one of a series of suitable for the decoration of or private rooms.

ess: Avon Buildings, Lower Road, Bath.

IUEL ELLIOTT AND SONS.

Row J, Stand 184.

company has a very wide reputa- woodwork, and the special work rm is here shown in various types lling, including their patent inter- rail panelling, which is fitted up in a small room with a very beautiful English oak door and chimneypiece.

Other fine specimens of panelled work are shown, also some good veneered work. The mouldings, arranged in panels on the walls, are taken from the firm's catalogue of Authentic Mouldings—each section being a reproduction of a moulding used in the various periods from the sixteenth to the end of the eighteenth centuries.

One corner of the stand is occupied by the firm's patent anti-cyclone convertible revolving door (two-compartment type). These doors are a speciality of the company's, and a great many have been erected in various parts of the country and abroad. The door exhibited is a very fine sample of workmanship and design.

A model is also shown of the company's four-compartment door of the usual type, but with new collapsing features which make the revolving door easily the best of its type.

Samples of parquet flooring are shown, together with specimens of church work.

Address: Reading.

WILLIAM OLIVER AND SONS, LTD.

Row A, Stand 5.

This exhibit shows a speciality of the firm in Austrian wainscot oak boards and planks, with both edges squared, a large selection of timbers, including English and French walnut, English wainscot, oak, and sycamore, and various samples of mahogany. A variety of American woods is also exhibited.

Address: 120 Bunhill Row, E.C.1.

SOLIGNUM.

Row F, Stand 104.

The exhibit, which is most attractive, consists of two small summerhouses joined by a pergola, and set in a laid-out garden. The summerhouses, which are constructed entirely of wood, are designed to show the numerous uses of Solignum. As a preservative, Solignum is already widely known and valued, but there must be many to whom this demonstration of its uses for the decoration of internal woodwork, and of its value as a floor stain, will be a revelation. All the eighteen shades in which Solignum is manufactured are embodied in the colour-scheme.

Address: 205 Borough High Street, London, S.E.1.

VENESTA, LTD.

Row E, Stand 95.

This exhibit shows Venesta plywood for panelling and partition work of every description. This can be quickly fixed, and is ready for immediate decoration in a variety of styles.

One section of the exhibit displays panelling for walls, stained and wax polished, also left white for distemper or paint, and another treatment in mahogany and white. The ceilings show two different designs, cheaper than lath and plaster, and much more durable.

The adjoining section demonstrates the use of oak plywood for period panelling.

The ornamental plywood is particularly suitable for dining rooms, lounge halls, billiard rooms, libraries, board rooms, etc.

Address: 1 Great Tower Street, E.C.3.

Cooking and Heating

CARRON COMPANY.

Row K, Stand 202.

Row L, Stand 220.

The Carron Company show in operation a new design of their No. 1188BB interior grate. This is a good class of interior, specially adapted for modern housing requirements, and is fitted with a welded back boiler for hot water supply. A feature of this grate is the hinged fire front, forming a pot rest, and the swing trivets, making it admirably adapted for living or sitting rooms.

Also on view is the celebrated "Carron" range with the inner glass oven door. This range embodies all the latest improvements, including cast-iron flues, hot closet with glass doors, etc. Amongst the other ranges shown is the popular "New Beetonette" range, with high-pressure back boiler, plate rack, etc., the "Cambrian," a well-finished, high-class range, and the No. 429 range—a favourite in housing schemes, with projecting corners and iron jamb mouldings.

A varied selection of interior and mantel register grates is also shown, both with and without back boilers. High-class fire dogs, dog grates, pierced steel and engraved hob register grates, are seen—examples of their fine collection of models, embracing many unique and authentic period designs, ranging from Elizabethan to the present day. This section is completed with armour bright grates, wood chimneypieces, and a varied selection of complete fireplace suites.

Smokeless stoves, gas and electric fires and cookers, porcelain enamelled parallel-sided baths, lavatory basins and towel rails complete the exhibit.

Address: Carron, Stirlingshire.

INTERNATIONAL ONEPIPE HEATER LTD.

Row J, Stand 173.

A striking demonstration is here given of the Onepipe Heater in operation.

By its means, it is claimed, an entire house can be heated from one central source without pipes or radiators, and with a fuel consumption of no more than that of one ordinary open grate.

The International Onepipe Heater is an ingeniously designed apparatus, which takes advantage of nature's own principle of warm air rising and cold air falling. In so doing the heater, through its very construction, is held to add double efficiency to its own operation, in not only diffusing a delightful warmth throughout the entire residence, but also in removing the icy-cold air from the floor levels. The installation is an exceedingly simple matter, and can be completed within two to three days without any inconvenience to the householder.

All that is needed is a cellar or basement, and the only evidence of the heater in the house is an ornamental oxidized copper grid placed usually in the hall on the ground floor. There are no pipes or radiators, and no alterations in the house are involved.

The cost of a complete installation approximates about £125, and the upkeep expended on fuel is reduced to a minimum, much less fuel being needed than with the ordinary firegrates, and stoking is only

required once in the morning and once in the evening. The heater will burn coke or anthracite with equal efficiency, and it is possible to attain a maximum temperature of 75 degrees throughout an entire residence, which can be regulated to suit individual taste by means of a small copper device which is fitted on the ground floor.

Address : 36–38 Victoria Street, London, S.W.1.

MESSRS. WOOD, RUSSELL AND CO.

The "Sentry" independent hot-water boiler, exhibited on various stands, presents several novel features, and is made in five sizes ranging in output from 80 to 200 gallons of hot water per hour. It is obtainable in cast-iron, wrought-iron, or copper. In this boiler, by reason of a large and well-protected mica front, the fire is always visible, and a special furnace door which, open, acts as a trivet to the open fire is also provided. This and the large flat "hot plate" top make culinary operations on a moderate scale a simple matter.

The No. 1 size produces a thirty-gallon hot bath every quarter of an hour, and the normal fuel consumption is 32 lb. of broken coke per twenty-four hours, less than half the fuel required for working a kitchen range boiler.

The importance of finish and general appearance is not overlooked, various prominent portions being produced with a highly polished surface which, at a very small addition to the price, can be had nickel-plated.

Stocks of "Sentry" boilers are carried by all the principal builders' merchants, from whom prices and full particulars can be obtained, as well as, of course, from Messrs. Wood, Russell & Co.

Address : 34 Oxford Street, London.

Lifts

MEDWAY'S SAFETY LIFT COMPANY, LTD.

Row D, Stand 64.

This old-established and well-known firm are exhibiting several of their "Britain's Best" lifts, including :—

Medway's electric passenger lift, fixed in a special steel structure, and provided with Medway's improved dual-system of control. The lift can be changed from automatic push-button operation to car-switch control by merely pressing a button. The lift is fitted with tamper-proof locks and switches on all gates. The control gear is seen in full operation, and a special feature of this controller is the decelerator, which ensures smooth starting and stopping at whatever speed. In addition, this lift is fitted with a special flashlight bell indicator, which supersedes the old bell system, which was a continual source of trouble.

Medway's electric push-button service lift is, it is stated, now greatly in demand owing to the small cost of installation, compactness, and reliability. It is fitted with interlocks to shutters, and a "fool proof" controller.

An interesting feature is Medway's patent electric door operating device, by which the doors or gates on the cage and at the landing are each automatically operated simultaneously by merely pressing a button. This device dispenses with the necessity of the lift attendant crossing the car to open the doors, and can be employed wherever electric supply is available.

Medway's hand-operated service lifts, also exhibited, are provided with self-sustaining gear, and in addition there is a special exhibition of many auxiliary parts in connection with electric and hydraulic lifts, comprising push-box, control limit, switches, gate switches, door locks, car switch, bell systems, and hydraulic valves.

Address : 1 and 2 Bucklersbury, E.C.4.

WAYGOOD-OTIS, LTD.

Row F, Stand 115.

Messrs. Waygood-Otis, Limited are again this year occupying their usual position in the exhibition, but have taken a larger space in order to have more room to exhibit their manufactures.

They are again showing a full size working passenger lift running from the ground floor to the gallery, which is capable of taking ten passengers at a speed of 175 ft. per minute.

The lift is fitted in a self-contained steel structure, which is suitably enclosed and fitted at each level with collapsible gates of top-hung pattern.

The machine is of standard design, and the motor is built to their own design for lift work, being directly coupled to worm and wheel winding gear. The worm is arranged beneath the wheel so as to be always running in oil, and the thrust of the worm shaft is taken by ball thrust bearings. The driving shaft is fitted with standard traction sheave with four steel wire ropes connected to the car and counter balance weight, and a powerful automatic electric brake is mounted on the coupling between the motor and winding machine.

The controller is designed to give smooth starting and stopping, and the lift is arranged with special controlling apparatus so that it can be operated from inside the car by an attendant. A dual control is provided, enabling the lift by means of the operation of a change over switch to be worked on the full automatic push-button system by which car can be called to a landing when t is no one travelling in same by pre a button fitted outside the enclosur

The landing gates are fitted with i locking gear designed so that the cannot be started unless the gates shut, and the gates cannot be op until the car arrives at the floor.

The car body is of oak with vene walnut panels, and a new desig indicator is provided in the car to cal attention of the attendant from landings. Instead of the usual system a series of lamps is provide that when the bell-push on the landi pressed the lamp will light up and cate where the lift is required.

Special indicators are fitted on the side of lift shaft to illustrate va systems which are installed by Me Waygood-Otis, Ltd. for the purpose in connection with the automatic co an indicator is provided with a lamp w lights up an illuminated dial when lift is available, and responds to a enabling a passenger to tell at whether the lift is available or not.

A new feature is an illuminated t hold to the lift car, which is spec suitable for lifts in private house where working in dark shafts, so when a passenger is stepping into lift it is always possible to see the e position of the floor.

Messrs. Waygood-Otis are also sho a complete range of eight various of machines built by them from a s electric service lift gear up to the la size. These large machines have been f for Messrs. Selfridge, Messrs. Har the New County Hall, and other im tant installations.

Working models are shown of an tric push-button lift and of one of light electric service lifts specially signed for private houses or light re rant purposes.

Hand-power lifts are shown, on loads of 10 cwt., and two for light se duty, worked by hand rope or by h and foot brake.

A number of fittings and access are also shown for electric and hydr lifts.

Address : 54 and 55 Fetter Lane, E

ELECTRIC PASSENGER LIFT.
(MEDWAY'S SAFETY LIFT COMPANY, LTD.)

Paints and Enamels

WM. HARLAND AND SON.

Row H, Stand 152.

This stand represents a pavilion i Renaissance style, with a proje portico and Ionic columns.

The exterior is treated with Harl sanitary flat enamel, the Sienna m pilasters with Harland's white m varnish, and the columns are fin with Harland's well-known Sn glossy enamel.

Passing through the entrance, visitor stands in a hall with a domed representing the heavens. The de tive scheme here is worked out several shades of brown, relieved w soft blue intermixed with white. land's sanitary flat enamel is material used, giving a soft and monious effect.

This enamel can be scrubbed i same way as ordinary paintwork, may be applied for any interior de tion where paint and distemper are able.

ed round the hall are several finished with Harland's bronze which is admirably adapted for rnamentation of metal-work in ngs.
the left is a room designed with ng, and carried out with a blue, grey, and silver treatment.
he room on the right a number of are shown treated with Harland's le stains. This excellent stain s a rich effect to the plain wood vealing the grain to the utmost, new and transparent result may be d in a most economical manner by -graining over either new or old ork.
els are also arranged around the representing Harland's various ities for the use of the painter and tor. The whole of the decorative n this stand has been prepared and up with Harland's ideal under- g "Harlania," a new material sing the combined advantages of a film and a wood filler, easily cut with extraordinary covering ty, good flow, and perfect white-

whole of the decorative work on and has been carried out by Messrs & Co., Ltd., Tottenham Court London.
ress : Merton, S.W.19.

ADFIELDS (MERTON), LTD.
Row E, Stand 88.

lfields (Merton) Ltd.'s exhibit again the form of the Oriental design attracted so much attention at ia last year, the rich red and dense lacquer effect contrasting with the ful white of their Heolin enamel. tand is the design of Mr. Chas. E. , and the decoration of it has been l out exclusively with Heolin ials under his supervision at Messrs. ld's factory at Mitcham. Perhaps nost interesting feature of this t is the demonstration of the Heolin rating and Heolin finishing paints, , in conjunction with one another, to give a perfect finish in two coats re wood for interior work. Visitors exhibition will also have an oppor- of inspecting work done with superfine varnishes for which Messrs. Hadfields are so justly celebrated.

Address : Western Road, Mitcham, Surrey.

Soundproofing and Waterproofing Materials

BUILDING PRODUCTS, LTD.
Row D, Stand 59.

The main feature of this stand is a sound-proofed office demonstrating the wonderful properties of Cabot's Quilt, for which Messrs. Building Products Ltd. are the sole concessionaires in this country. Visitors can test for themselves the wonderful sound-proofing qualities of this material by stepping out of the noise of the exhibition into the absolute quietude of the insulated office.

The quilt is a thick resilient matting of cured eel-grass between sheets of extremely tough Kraft paper. The eel-grass has a tough flat fibre that forms thousands of dead air spaces which make an insulating layer that the most thorough tests have proved superior to all other insulating materials.

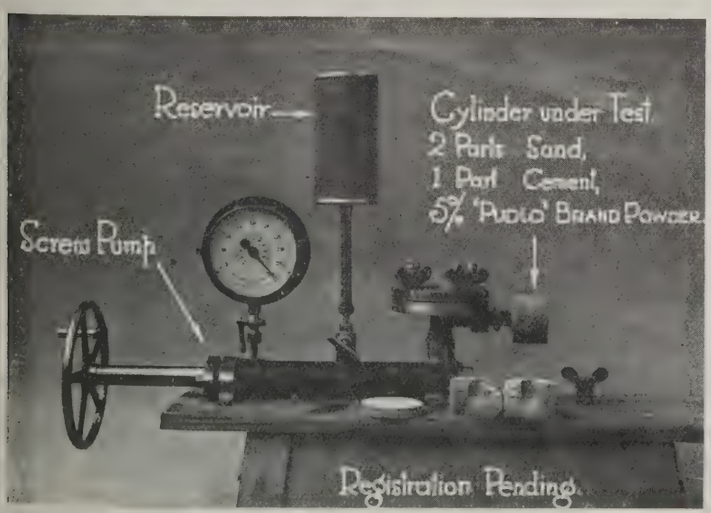
Owing to the fact that the door of the insulated room has to be continually opened to allow visitors in and out, it was found impossible to demonstrate the heat insulating properties of the quilt, but it is claimed that it is just as effective as a heat insulator as it is as a sound deadener.

The pamphlet published by Messrs. Building Products Ltd. states that the quilt is heat-proof, sound-proof, rot-proof, vermin-proof, and very strongly fire-resistant, and that wherever heat or sound insulation is desirable, it is the most efficacious and economical material for the purpose.

An interesting variety of buildings on which the quilt can be used is shown on a list exhibited on the stand.

In addition to the quilt, Messrs. Building Products Ltd. also show samples of their well-known auxiliaries for concrete structures, including Bareau cement concrete waterproofing powder, Prufit waterproofing paste, Prufitol weather-proofer, Rigifix fittings, and Ferrolithic concrete hardener.

Address : Columbia House, 44–46 King's Road, Sloane Square, S.W.3.



MACHINE FOR TESTING CEMENT MIXTURES.
(KERNER-GREENWOOD & CO., LTD.)

KERNER-GREENWOOD & CO., LTD.
Row C, Stand 46.

"Pudlo" Brand cement waterproofing powder is familiar to our readers, but the makers exhibit a new testing machine, which we had not previously seen. Demonstrations are given with this novel apparatus for testing the resistance of waterproofed cement mixtures to permeation by water under pressure up to 300 lb. per square inch, the pressure being directly applied by means of a hydraulic screw pump.

The advantage of this method is obvious, since water is incompressible, and at the high pressures registered in Messrs. Kerner-Greenwood & Co.'s new apparatus the absorption of a single drop of water would at once be indicated on the pressure gauge by a decrease of many pounds.

An attachment to the machine enables waterproofed or non-waterproofed cement discs to be tested to destruction. It is found that discs of waterproofed cement (2 and 1 and 5 per cent. of "Pudlo" Brand Powder) $\frac{5}{8}$ in. thick fail by fracture at an average pressure of 110 lb. to the square inch, applied over a circular area 3 in. in diameter. Even when this occurs there is no evidence of the penetration of moisture into the substance of the waterproofed cement.

The various practical exhibits which have attracted so much attention at the two preceding exhibitions are again shown by Messrs. Kerner-Greenwood & Co., Ltd.

Address : King's Lynn, and 71 Newman Street, Oxford Street, W.1.

GEORGE M. CALLENDER & CO., LTD.
Row D, Stand 65.

This exhibit includes an interesting selection of waterproofing materials, noticeable among them being "Callendrite" sheeting, a waterproofing medium for reservoirs, filter beds, swimming baths, lakes, ponds, etc. A model reservoir with sloping sides is shown lined throughout with "Callendrite" sheeting, which is under a practical water test for the duration of the exhibition. In the centre of the reservoir is a column of loose porous bricks, under the top course of which, just above water level, is inserted a piece of "Callendrite" dampcourse. The dry bricks above the dampcourse should be noticed. "Callendrite" is supplied in rolls 24 ft. long, and its price averages 4d. per foot super delivered.

Callender's "Ledkore" dampcourse, also exhibited, is composed of a core of sheet lead with a special bitumen covering both sides. It contains no coal tar or pitch, and is suitable for all climates and purposes. Special attention is directed to the complete unification of the lead core with the bitumen covering. Price from 6d. per foot super delivered.

A wall shows the application of "Protex"; one portion is treated with "Protex" applied directly on to the brick and afterwards rendered with plaster; another portion shows the "Protex" applied to plaster and papered over. The water jets acting on the back of the wall practically demonstrate the absolute effectiveness of "Protex" as a damp resister.

Callender's "Bitusol" paint is recommended for iron and steel work of all descriptions, and the makers claim that it is an absolute preventive of rust. It is cheap, covers well, lasts long, and pro-

tects from corrosion. The roof of the office is covered with "Veribest" roofing, showing the method of application, and "Bitufelt" roofing, a high-grade roofing made from wool felt thoroughly saturated and coated with pure bitumen, and "Rooferite" felt are also shown.

Other exhibits are Callender's insulating paper, "Bitubond" building composition, and "Plastaleke" asbestic-bitumen cement, for the repair of leaky roofs of all kinds.

Address: 25 Victoria Street, London, S.W.1.

THE IRONITE CO., LTD.
Row F, Stand 102.

"Ironite" brand cement flooring, exhibited on this stand, has long been well known as an invaluable product for the treatment of floors. Its use will, it is claimed, render them wearproof, dustproof, and waterproof, and it is very largely used in machine shops, dock quays, cinemas, strong-rooms, and other situations where strength and durability are premier essentials. Ironite is also sold in the form of a waterproofing powder, only requiring to be mixed with water and applied with a brush. This can be applied to any existing brick or cement surface, and renders the whole perfectly waterproof. On the same stand are exhibited photographs of Marion steam and electric shovels, for which Messrs. S. Thornely, Mott, and Vines, Ltd. are the sole British agents. The small revolving types are largely used in the excavation of basements and on road and sewer work, and any of the machines are convertible into grab bucket excavators and cranes. Kilbourne and Jacobs tip wagons, Watson bottom dumping wagons, and Stroud elevating graders and road machines are also shown.

Address: 9 and 11 Old Queen Street, Westminster, S.W.1.

Miscellaneous

JAMES AUSTIN AND SONS, LTD.
Row E, Stand 96.

The exhibits show in a practical manner the various uses to which sash lines, venetian lines, glacie lines, and endless cords are put, and at the same time show why people have trouble with their windows and blinds, and how to avoid having this continual trouble. The point, of course, is that freedom from trouble, such as breakages, etc., can be achieved by having a well-made article manufactured from good material. Under these conditions people obtain much more satisfaction from using fibre sash cords than from using metal sash cords, sash chains, tapes, or any other metallic device, because from the very nature of the thing metal is not adaptable to continually working over a comparatively small pulley, and in the case of a chain it is not to be expected that the private householder, at any rate, will regularly clean and oil it, which is essential to proper working.

Address: St. George's Mills, Hoxton Square, London, N.1.

THE BRILLIANT SIGN CO., LTD.
Row H, Stand 155.

This firm has an interesting exhibit of all the latest designs in lettering and signs of all kinds, including the popular brilliant concave gold letters for attachment to the back of glass. The registered "Permenart" fired-in process backgrounds are also on view. The company state that they are at present making a speciality of illuminated signs, in view of their increasing popularity, and a large selection of these may be seen. Gilt wood letters in all styles are exhibited, together with window letters and signs of every variety. The exhibit includes cast bronze plates of ornate design, and a special feature is made of the new large recessed metal letters, designed for illuminated moving signs. The firm are the original inventors and patentees of more than one popular leading design, and further novelties will shortly be put on the market.

Address: 38 Gray's Inn Road, London, W.C.1.

FENNING & CO., LTD.
Row E, Stand 84.

Fenning & Co. exhibit a stand built entirely of marble, illustrating the use of many beautiful varieties of this material in floors, piers, wall linings, fascias, and entablatures.

Specimens of marble chimneypieces, including a fine carved Georgian example, are also shown.

Architectural details in granite, marble, and mosaic complete the exhibit.

Address: Palace Wharf, Rainville Road, Hammersmith, W.6.

STURTEVANT ENGINEERING CO., LTD.
Row E, Stand 91.

Sturtevant turbine vacuum cleaning plants are installed in a very considerable number of buildings of various sizes, being laid on in a similar manner to water, gas, and electricity. The piping is run to all parts of the building, hose connecting points being placed at frequent intervals—then by plugging in a length of flexible suction hose at any of the connections, the dust in the vicinity can be swept up with great rapidity and conveyed to the dustbin in the basement.

Not only are Sturtevant turbine plants suitable for cleaning carpets and upholstery in the most efficient manner possible, but they are now being used for effectively and rapidly sweeping bare floors of all kinds, linoleum, walls, plasterwork, and such surfaces. This machine has the eminently satisfactory characteristic that it adjusts itself automatically to give the correct volume and velocity of air at the cleaning tools for cleaning all kinds of surfaces, whether carpeted or uncarpeted.

These plants are in use in hote restaurants, steamships, large stor shops, banks, offices, theatres, cinem public halls, museums, blocks of fla residences of all sizes, churches, wo shops, factories, mills, carpet-cleani establishments, etc.

Address: 147 Queen Victoria Stre London, E C.4.

CARTER & COMPANY, LTD.
Row F, Stand 101.

Carter & Company, Ltd., have an tractive exhibit of all classes of tile p ducts. This includes suggestions interior wall tiling in dull surface tiles quiet and dignified effect, suited to t interior of a restaurant or similar bui ing. A series of new glazes which ha more variations of tone and a mo interesting quality than ordinary ma surface enamels, and fireplace plin cornice, and pilasters in a special co struction material known as "Sto ware," are also shown.

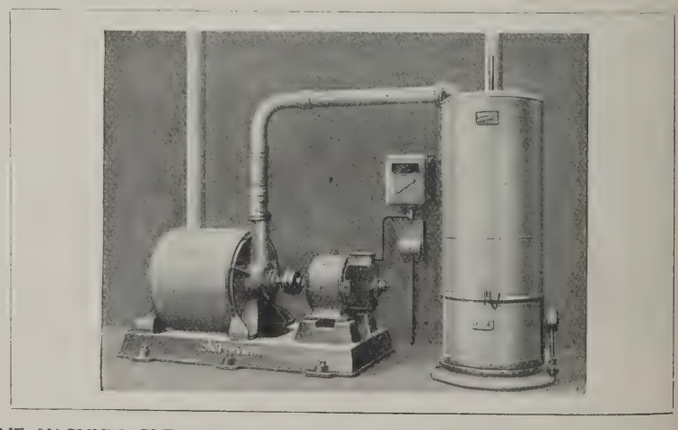
The outer side of this portion of th exhibit shows their ordinary Ang Dutch frost-proof tiling, which has l come so popular for exterior work, pa ticularly for shops where bright colou are required. An effective treatment seen in dull white matt surface tili relieved with green and cream, whi should be particularly suitable for t walls of provision and other shops whe a clean, bright atmosphere is require and also for domestic work in bathroon etc.

Other exhibits include a hob firepla surround of hand-painted tiles and o in mottled handcraft glazes; also a chur tiling adaptable for other purposes whe a rich effect is required.

For floor tilings apart from marl mosaic, which is of course so eas capable of adaptation to irregular-shap spaces and for the introduction of nam coats of arms, and trade marks, there a examples of Carter's vitreous whi green, and buff—a very bright, clea looking treatment for a floor, which actually being used by one of the l multiple shop companies. There is al a counter made of cream glazed faien the top of which is composed of terraz marble. This material is generally us for floors, and its employment on counter provides an interesting sugge tion.

One other line for which Mess

(*Exhibition Notices continued on page* xxxix.)



TURBINE VACUUM CLEANING PLANT. (STURTEVANT ENGINEERING CO., LTD.

r have long been famed is also re-
nted in two artistic hob fireplace
ors; while four examples of a lesser
n side line are shown in the shape of
n pottery.
dress: Poole, Dorset, and 29 Albert
ankment, S.E.

FASSIO PRODUCTS, LTD.
Row D, Stand 75.

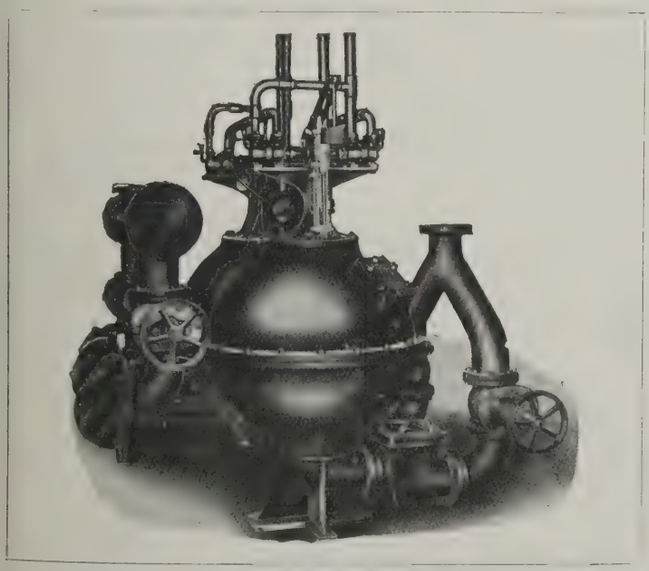
is stand consists of a pavilion, archi-
rally designed, showing the striking
le effects to be obtained from the
any's manufactured material.
dress: Argyle Place, Cromer Street,
s Inn Road, W.C.1.

PIRE STONE COMPANY, LTD.
Row E, Stand 86.

s exhibit is of a structure built of
pire Stone" to match Portland
portions of the work being carved.
company specializes in stonework
general building work, such as
as, theatres, offices, hospitals,
s, factories, etc., for which it is
y used. "Empire Stone" is manu-
ed in colour and texture to match
l stone.
mples of "Empire Stone" steps are
shown, including one made of
n Wood, a speciality being made of
ses for every class of building.
ire Stone" paving slabs, kerb, and
el are exhibited, and reinforced
te fence posts are another speciality
is company, standard posts for
nt purposes being stocked.
nforced concrete construction, and
, granolithic, and terrazzo paving,
so important features of the com-
work.
itors are requested to note that the
r house is offered for sale—a draw-
exhibited on the stand showing a
which could be added.
ress: Thanet House, Strand, W.C.

"RONUK," LTD.
Row 7, Stand 109.

whole of the woodwork of this
g exhibit has been treated by the
ly trained workmen of the Com-
Polishing Contract Department,
accordance with their well-known



MATIC EJECTOR FOR RAISING CRUDE SEWAGE. (TUKE AND BELL, LTD.)

A SEWAGE DISTRIBUTION PLANT. (TUKE AND BELL, LTD.)

improved sanitary methods. Visitors are cordially invited to enquire upon all matters relative to initial treatment and efficient and economical upkeep, while estimates for carrying out work in all parts of the country will gladly be given without obligation on their part.

Address: Head Office and Works: Portslade, Sussex. Branches: London and Manchester.

TUKE AND BELL, LTD.
Row D, Stand 61.

The exhibits are: Pneumatic ejector, with patent valve gear, for raising crude sewage for municipal or other purposes. Base, central column, and distributing tank with alternating tippers and lever and pawl gear, for the "Ideal" revolving distributors, made for all diameters from 10 ft. to 30 ft. These distributors are positive in action, and having no perforations liable to choke, will work for weeks without requiring any attention. Central column for the "Carlton" revolving distributor, made in all sizes for diameters up to 120 ft. Chain pump for sludging tanks, or for use on manure tanks and other purposes. Broadway double acting lift and force pump capable of raising thirty gallons per minute of sandy or gritty water. Architectural model of country house and grounds, showing the drainage system and semi-septic sewage purification plant, capable of dealing with all the drainage from the baths, lavatories, sinks, and w.c.'s, consisting of liquefaction tank, aerobic bacterial filter bed and humus chamber, giving an effluent comparable with rainwater, clear, inoffensive, and not liable to set up secondary decomposition, which may be passed into an ornamental garden pond.

Address: 27 Lincoln's Inn Fields.

THAMES PAPER COMPANY, LTD.
Row G, Stand 140.

This stand is attractively designed to illustrate the main uses of "SX" Board, an alternative to lath and plaster for interior lining. Various methods of panelling, which is one of the charming features of this form of interior lining, are shown on this stand. "SX" Board is a British-made article.

Address: Purfleet, Essex.

PERCY C. WEBB, LTD.
Row J, Stand, 177.

The features of this year's stand are Rosso Antico—the red marble of the ancient Greeks and Romans—and Bryscom, the new building stone.

At one end of the stand is shown a wall-lining, with pilasters and frieze, in which Rosso Antico has been incorporated with the Blancil Black and Tula Vein marbles. A Rosso Antico pedestal, suitable for a bust or electric lamp, is shown with a flower vase and pedestal in the same marble.

The effectiveness of Bryscom walling is shown in a porch with doorway, and from this example the scope which Bryscom offers in cottage, bungalow, and church designing will be readily appreciated. The exhibition wall is built of worked stones in courses of an average thickness of 5 in., while the doorway is fitted with fine-axed jambs and lintel. The roofing is of picturesque tile-stones quarried in the same locality as Bryscom.

The possibilities of Bryscom as a decorative marble are clearly shown in a polished pedestal: here the richly brecciated pattern is displayed to full advantage

A wide range of smaller specimens of British and foreign marbles is on the stand.

The whole exhibit is mounted on a fine tiled flooring in Sicilian marble with "dots" in several choice coloured marbles.

Some decorative Onyx lamps and Alabaster electric light bowls are also shown.

Messrs. Webb are issuing some special literature for the exhibition, including a small folder giving the history of Rosso Antico.

Address: St. Katharine Docks, London.

The Week's News

Housing at Staveley.

The Ministry of Health have sanctioned a further 119 houses for Staveley. Already 101 are in course of erection.

St. Giles's, Cripplegate.

It has been decided to insure, for £7,000, the stained glass windows of the church of St. Giles's, Cripplegate.

Chelmsford Housing Scheme.

Out of the 280 houses contracted for by the Chelmsford Housing Committee 112 have been completed.

Hull Art Gallery.

Mr. John W. Simpson, F.R.I.B.A., has been selected as assessor for the Hull Art Gallery competition.

Malvern Priory Church.

Malvern Priory Church, one of the finest old Gothic buildings in the country, is badly in need of repair.

Swing Bridge at Limerick.

Preparations have been made for the erection of the new swing bridge over the Shannon at Sarsfield Street, Limerick.

Brick Prices in Leeds.

Bricks are being offered in Leeds and district at from 55s. to 60s. per 1,000, but a prominent maker has hinted at the possibility of their becoming dearer again.

Brighton's New Houses.

Brighton Council has sanctioned a contract for thirty-two houses at £440, with a reduction corresponding to a fall in wages.

New Church for Birkenhead.

A new Memorial Church is being erected at Birkenhead. The church and hall will cost £11,129. The architects of the new building are Messrs. Morter and Dobie, The Temple, Liverpool.

Rebuilding of Cork.

Steps are being taken to expedite the commencement of rebuilding operations in Cork. The Provisional Government will issue money for the rebuilding of the city.

Housing in Vienna.

The housing question in Vienna is becoming tragic. Over 36,000 persons have now registered their names for dwellings with the Municipal Housing Board, which is supposed to allot accommodation, and the number of applicants is increasing at the rate of 300 a week.

The King to Open the L.C.C. Hall

The King will open the New County Hall in the third week of July. More than ten years have passed since the King laid the foundation stone. Nearly half a million of money was spent in completing the building last year, and up to March 1921 the total expenditure was £1,885,000.

Concrete Institute Award.

The Council of the Concrete Institute, London, have awarded the Medal of the Institute, given for the best paper of the session, to Professor F. C. Lea, D.Sc., M.Inst.C.E., M.Inst.M.E., professor of Civil Engineering in the University of Birmingham, for his original paper on the "Elastic Modulus of Concrete."

Lincoln Cathedral Restoration.

Though there has been some response to the appeal for £50,000 for repair and restoration of Lincoln Cathedral, the authorities are very anxious that there should be more fluid capital to enable them to continue the work without a break. It is certain that the Norman foundations cannot be trusted, and there is little hope that less than £50,000 will be required.

War Memorial Window, Newbottle.

The War Memorial Committee of Newbottle Parish Church, Newcastle, have commissioned Messrs. Atkinson Brothers, stained glass artists, of Newcastle, to execute the large west window, in memo of over one hundred men of the pa who gave their lives in the war. subjects to be illustrated are "Christ's to St. Matthew," "The Transfiguratio and "The Raising of the Widow's Son

Safety of Westminster Bridge.

At a meeting of the London Cou Council Mr. J. W. Gilbert, M.P., as whether attention had been drawn questions in Parliament regarding safety of Westminster Bridge, and w caused the noises heard by passen when certain traffic was passing o Mr. C. W. Matthews, Chairman of Highways Committee, said the engi had reported that up to the present t was no indication that the increa weight of vehicles in the last fifteen y had had any ill-effect. The noise vibration were due to the fact that s of the bolts in the parapet worked l and had to be attended to from tim time. This had nothing to do with strength of the bridge.

Beaux-Arts Committee. New Hono Secretary.

Since the establishment of the I Atelier of Architecture in London by Beaux-Arts Committee in 1913 honorary secretaryship of the comm has been undertaken by Mr. C. McAr Butler, who has now relinquishe owing to the pressure of his engagem as secretary of the Society of Archit His successor in office is Mr. Car Lafontaine, whose acceptance of position will be regarded by all who acquainted with his qualifications good augury for the further progress development of the committee's ed tional activities. The work of the mittee and of the atelier will cont to be carried on at 28 Bedford Squ W.C. 1, and Mr. McArthur But experience will be at the disposal of Beaux-Arts Committee, of which remains a member.

BARDSLEY

Reversible OIL DOOR CHECK and SPRING (for right or left-hand doors, without adjustment).

As used in the Royal Palaces, Houses of Parliament, Royal Courts of Justice, Post Offices; by the leading Railways, Steamship Companies, Hotels, Restaurants, Theatres.

MADE IN OUR OWN WORKS BY FIRST CLASS ENGINEERS, AND CONSEQUENTLY THE MOST SATISFACTORY IN USE.

NETTLEFOLD & SONS LTD. 54 HIGH HOLBORN LONDON W.C.1.

IN STOCK

From 35/6 each complete.

Gilt and Statuary Bronze Finishes.

No special skill required for fixing.

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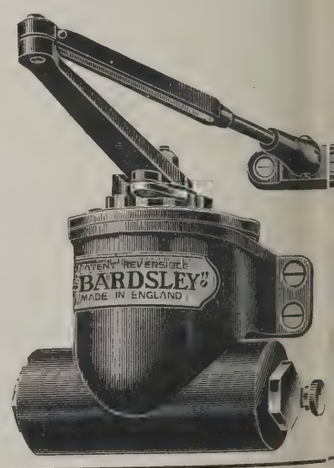


G. JACKSON & SONS, Ltd.,
49 RATHBONE PLACE, LONDON, W. 1.
FIBROUS PLASTER,
FRENCH "STUC," CARTON-PIERRE, WOODWORK, &c.

lay, April 19, 1922. Vol. LV. No. 1424

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

FROM THE POSTER ADVERTISING THE A.A. CARNIVAL AT OLYMPIA.

The A.A. Carnival consists of an "Architects' Olympian Night," which is to be held in the Conference Hall at Olympia, on Friday, April 21, from 9 p.m. to 5 a.m. Tickets can be obtained from Mr. F. R. Yerbury, secretary, the A.A., 34, 35, and 36 Bedford Square, W.C. 1. Single tickets are £1 1s. each, and double tickets £1 15s. As the above poster suggests, the fun is to be fast and furious, including a "Brighter Building" procession through Olympia. The drawing, which is in colour, is by Mr. W. Champneys.

27-29 Tothill Street, Westminster, S.W.1.

Drury Lane Theatre : The King's Staircase

Benjamin Wyatt, Architect

Drury Lane Theatre has now been entirely redecorated, and the auditorium has been rebuilt. This makes the seventh rebuilding in just under three hundred years. Drury Lane was opened by Charles the Second in 1663, and rebuilt by Wren in 1674, by Henry Holland in 1794, by Wyatt in 1812, and by others in 1894, 1904, and 1908. The King's Staircase is Wyatt's, and, as can be seen, an excellent piece of design. The monumental effect is got, but there is a charming simplicity and restraint.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.
esday, April 19, 1922 Volume LV. No. 1424

Theatre Design and Decoration

RCHITECTS, and indeed all who are interested in the housing of the drama, will be glad to see the illustrations we give of the extensive alterations to the interior of Drury Lane Theatre. Lane is by way of being a national institution, and such an important place in the annals of the stage that ing that happens to it is always sure of widespread ion.

e was when to tread the classic boards of "Old Drury" he summit of every aspiring actor's ambition, even h he were but a strolling player as Edmund Kean once For its memories are of Garrick, the Keans, the les, Mrs. Siddons, Macready, and their high fame is rable from it. By a happy inspiration it was that ondon County Council revived those traditions by to some of the surrounding streets the names of actors and actresses—Kemble Street, Keeley Street, Street, and so forth: a pleasantly educative and historical method of labelling.

ry Lane Theatre established, of course, a much earlier to a place in history. Killigrew and Sir William ant, its first patentees, opened it in April 1663. It the King's House," for the King's Company, "His ty's Servants"; the "Duke's Company" being at t Garden; and a reform that Killigrew and Davenant e brought in was to give female parts to women d of to boys.

672 the theatre was the centre of a tremendous fire, ich sixty houses were burnt down. It was quickly t by Wren, and was opened in 1674. In 1791 it was t by Holland; and yet a fourth rebuilding was achieved 2, at a cost of £200,000, by Holland and Wyatt.

completion of the latest reconstruction opens a eld of debate—revives and makes topical the whole on of theatre design, a theme much canvassed of nore especially by Mr. Gordon Craig, whose enthu- for "the art of the theatre" knows no bounds, and genius in it has lifted the whole subject clear out of mmonplace rut into which it had sunk up to the ws. His recent articles in "The Times" on the rdam Exhibition of his design glowed with the e fervour of his passionate desire to bring art into the e—into its material construction as well as into the of presentation.

Gordon Craig was much struck by the fact that l actors were among the exhibitors at Amsterdam. consider," is his comment, "how interesting it is I tell you that already in Europe many of the actors her stage men are now beginning to learn how to —discovering how to design their own stages, scenes, es, and even theatres. M. Jouvet's designs sent here se for the new stage of the Vieux Colombier in Paris. , the actor-architect—I am sure he would laugh to e call him that, but I do not laugh; for that is what sworn the stage can do—produce men who shall do wn work, not calling on outsiders to do three-quarters r them."

e pregnant passages refer mainly, it will be seen, to sign of "stages, scenes, costumes," and it is not too to expect that in such matters the "theatre-men" should be prepared to give competent advice. But it is quite certain that Mr. Gordon Craig does not wish to push his argument to an extreme. His contention is, we take it, that the "theatre-man," being well acquainted with the fundamental principles of art, and knowing how they should be applied in particular instances, is in a position to collaborate intelligently with the specialist in design, be its architect, scene-painter, or costumier. If this is what Mr. Gordon Craig means, architects certainly can have no quarrel with him. They like to collaborate with the man who knows, or to take instructions from a well-informed and sweetly reasonable client, who knows exactly what he wants and can convey the idea clearly to the man who can carry it out and who can say with Shylock, "It shall go hard with me if I do not better the 'instruction.'"

This must certainly be what Mr. Gordon Craig means; for the only perceptible alternative is that an actor or "theatre-man" should be a miracle of omniscience and versatility, competent to cobble his own buskin and darn his own sock, as well as to elaborate the working drawings for his own theatre. If he were really to give adequate attention to all these matters, he would have scant time and strength to devote to his proper profession of acting.

Of course, Mr. Gordon Craig means nothing so preposterously nonsensical; but, all the same, architects, who of all men recognize most clearly and appreciate most keenly the rare genius with which he is transforming the theatre into a temple of art, and are thankful to him for his having swept away many of the stale and inept conventions with which the theatre had become encrusted, would feel themselves still further indebted to him for a clearer explanation of the term "actor-architect" used in his article. Such an explanation might remove a few groundless fears that have sprung up among those who imagine that all-round artists like Leonardo, Michelangelo, Benvenuto even, ready to design you anything you like that can take form or colour, were peculiar to the Renaissance, and that to-day anyone pretending to such prodigious versatility would be a mere "Jack-of-all-trades and master of none."

Lord Howard de Walden, President of the British Drama League, and Sir Cecil H. Smith, Director of the Victoria and Albert Museum, have announced the good news that they, with representatives of the Actors' Association, the British Drama League, and other bodies and persons connected with the theatre, had met to consider the possibility of transferring to England the very important International Exhibition of Theatre Art which was so successful at Amsterdam, and it is now stated that the exhibition has been secured for the V. and A. Museum, and will be seen there next June.

The letter in which this transference was first publicly advocated includes a very eloquent *apologia* for the exhibition, and incidentally for the Museum, which, we are told, and gladly believe, "is the officially constituted centre and home of all the industrial arts," and we are most willing to concede that "in giving a worthy setting to this exhibition the V. and A. will be fulfilling its function by encouraging the cultivation of the wide field of art, ranging from architecture and lighting to costume design, with which theatre art is concerned."

Not less true than turgid; but in the passage that immediately follows there is an implied reproach: "The artistic side of the drama," we are reminded, "has never had, in this country, the recognition that other arts, such as painting, have had; and to show the æsthetic side of the theatre is a matter of vast importance for our national credit, as well as a stimulus to all who are concerned with the forward movement in the arts and crafts of the theatre." Of late years this forward movement has been steadily gathering force, and doubtless the transplanted Amsterdam Exhibition will give it an immense impetus. We are now beginning to see whither we are tending in theatrical æsthetics—whether towards simplification and unencrusted art, or whether towards grandiosity and gorgeousness. And the theatre does not merely "hold the mirror up to nature"; it reflects art as well. And, alas! too often it is in each case a distorting mirror.

The International Building Trades Exhibition

In this the second of the series of special issues in which we are dealing with all possible thoroughness with the International Building Trades Exhibition, detailed accounts are given of a large number of the principal exhibits, and in addition the various sections into which the exhibition may be classified are surveyed as a whole by contributors specially qualified to draw a few useful generalizations about them; detailed descriptions of the various items appearing as specific notices of each stall or stand. It is hoped that the account of the exhibition as presented in our special issues will not only afford clear guidance to visitors, but will also serve as an invaluable help in specification by those architects who, living at a distance whether at home or abroad—for we are happy in having a very large number of professional readers overseas—are unable to visit the exhibition at Olympia. From our description of its contents, and of the activities that find place there, it will be inferred, without our saying it, that the exhibition is likely to be from every point of view one of the most successful of the series.

The Father of the L.C.C.

Sir John Williams Benn, Bart., who died on April 10, was distinguished as the "Father of the London County Council," having been the only original member of it elected last March. Curiously, he had, in his first Parliamentary contest, in 1892, defeated the sponsor of the Act that created the London County Council, Mr. C. T. Ritchie, against whom he was successful at St. George's-in-the-East. In his early years Benn acquired great popularity as a lecturer, and this experience, supervening upon great natural aptitude, made him an exceedingly ready speaker, always eager for debate, if not very profound in it. He had been a member of the London County Council for three-and-thirty years, and in 1904 was elected its chairman; and it was for his enthusiastic and indefatigable services for London that he was knighted in 1906 and created a baronet in 1914; whilst almost exactly a year ago—in April 1921—when he was entertained at a complimentary luncheon as "the Father of the L.C.C.," he received a message from the King congratulating him on his "long service to the government of London." Like so many other "great Londoners"—like Mr. C. T. Ritchie, for example—Benn was country-born, being a native of Hyde in Cheshire; and although the government of London absorbed so much of his energy, he was equally interested in the promotion of design and craftsmanship, especially in cabinet-making and in furniture design: and by means of the periodicals and other publications issued by the firm of which he was the head, he did much to revive the styles of Chippendale, Sheraton, and Heppelwhite. One of his brothers, the late Mr. Davis Benn, wrote a standard work on "Style in Furniture," and another, Mr. Henry Benn, has a high reputation as a skilful furniture designer and draughtsman, while Sir John himself, in his lecturing days, showed remarkable facility as a "lightning sketcher" of "Heads of the People," and so forth. On the County Council he was a powerful influence in the promotion of transport, and it will be recalled that his eager interest in the subject got hi one occasion into serious trouble in the law courts.

Forms of Contract

There is renewed hope that a National Standard Fo Conditions of Contract will come into existence some The R.I.B.A., the Institute of Builders, and the Nat Federation of Building Trades Employers, are ab agreed to the extent of authorizing their respective taries to sign a joint letter stating that the form issu October 1909 may be used temporarily with the app of those bodies. That is of good augury for an ult settlement of this much-vexed question of a standa national form of contract. It is most unlikely that a completely satisfactory to all the interests concern it can ever be evolved; but that fact should not hind production of a really sound and equitable form, shall do no real injustice to any party to the contr architect, builder, or client. It is all a question of give take and breadth of view; and an equitable "agreed f would stand for a symbol of the unity that pro amenity—a symbol and an evidence of good form.

Ventilating a Grievance

Once again members of the House of Commons trotted out their familiar complaint about the def warming and ventilation of the House. Nor could refrain from repeating the well-worn antithesis suffering from "hot heads and cold feet." It has, hov the merit of being accurate, as well as epigrammati no less an authority than Dr. Leonard Hill had de that while thermometers "show a uniform temper of 63 degrees, members' feet are cooled at a rate wh 40 degrees or more greater than the cooling of their he That is because the ventilating current is driven up th the floor. Ventilation by the simple means of openi windows was not favoured, members objecting t "smuts." That objection is quite easy to unders Smokeless London is as yet but an aspiration; and it s not be forgotten that the snorting steam-tugs on the contribute heavily to the pollution of the atmos about the Parliament buildings. But something shou done to suppress this perpetual grievance of the def ventilation of the Houses of Parliament

Alarming State of our Parliament Build

It is a matter of history that the Commission app to select a stone for building the Houses of Parli visited all the important quarries in the kingdom, insp all the ancient buildings to ascertain how their ston weathered, and, in short, adopted every conceivabl caution, and then chose precisely the wrong ston cannot stand the smoke-laden London atmosphere began "flaking" immediately. In the House of Com on April 11, Sir J. Gilmour, representing the First missioner of Works, had sorrowfully to acknowledg "the question of decayed stonework in the Hou Parliament buildings was causing the gravest conc the Office of Works," but that "this year they ha asked for a sum of money sufficient for the removal o portions of the decayed stonework which would be a d to the members of the House or to the public in the v of the House." He had to confess, moreover, that th asked was inadequate to the substitution of sound for that which had decayed. The seriousness of this can hardly be exaggerated. Sooner than is ge suspected, the question of a drastic remedy will hav faced with courage that must be almost heroic in days of pinching economy. Another condition that like a menace of doom over our Parliament buildings constantly reiterated complaint by members tha House of Commons is not half large enough to accomm a full complement of legislators. As Colonel Ashl the other night, although the membership is 700, are only 320 seats. With every respect for Barry's p piece, it is impossible to avoid the sorrowful admissi it has become inadequate to its functions.

Domed Pavilion—Its Construction and Stone-Cutting

By J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

THE domed pavilion shown in Fig. 1 is designed as an architectural feature at the junction of two vaulted loggie enclosing a quadrangle.

The inclusion of an outer dome with moulded an inner dome; a pendentive with a drum support- superstructure; and the employment of a pilaster, , and pediment in the treatment of the wall, provide ble basis for a comprehensive study of stereotomy as to this type of architectural masonry.

ne Principles of Dome Construction

outward thrust of a dome near its base requires to teracted by adding a mass of masonry on the outer just above the springing level, or by the introduc- metal ties or cramps embedded in the masonry near e. The outward thrust is thus diverted into a more l direction.

cramps—usually of copper—are inserted in the upper the stones, but an objection to the use of cramps is ch stone in the course in which the cramps are used ght into tension.

tter arrangement is to have a continuous ring of sunk into the upper beds of the courses in which e required—see III, Fig. 2. It is essential that the or ties should be properly embedded in Portland

dome of hemispherical form, with a proper thickness erial and without a lantern or heavy finial on the top, ed not be inserted in any bed-joint which makes a angle than 23 deg. to the horizontal base. All the above this angle press inwards, each circular course g a horizontal arch keying itself. The dome, there- independent of a keystone.

es of pointed form are more stable than those of herical form, and this outline therefore should be ed when a lantern or heavy finial has to be supported top. See the outer dome, Fig. 1.

one dome need not be uniform in thickness through- r if reduced gradually towards the crown it can do ss material in every part.

greater the weight in the upper part of the dome, the will be the horizontal thrust. The dome there- quires less thickness and is more stable when an eye ed in the top as in the inner dome, Fig. 1.

n openings are cut through the lower part of a dome, bility is greatly diminished by the loss in weight and reduction of the base area of the dome.

Small Scale Drawing (Fig. 1)

domed compartment in plan is approximately nal as shown in the key plan I, four sides of the n forming part of a cylinder 14 ft. in diameter. liately above the arched openings on the other four of the octagon, the plan assumes a circular form, as a cylindrical drum of 12 ft. 5 in. diameter, to sup- he inner dome. This drum is supported by "cor- out" a pendentive commencing at the springing f the four arches.

inner dome is designed for internal effect, and is re kept as low as possible. The form in this le being not quite so high as a hemisphere the out- thrust at the base will be considerable. This, how- s counteracted by the weight of the superposed outer and by the mass of masonry on the outer part of the three lower courses. In this dome, with an opening at the crown and an abundant mass at the base, metal ties are not required.

The outer dome is designed for external effect, and having a finial to support at the crown the contour is made slightly pointed. There being no added mass of masonry at the base of this dome, the outward thrust is counteracted by the use of copper cramps inserted in the three lower courses —see detail, Fig. 2.

The courses in the plan of the outer dome, VI, are projected from the section V, and the elevation of the ribs and panels are projected across from the section and down from the plan.

Full-size Drawings and Projection of Moulds

The "setting-out" of the constructional features in the design and the projection of the moulds required will be illustrated by four detail drawings to a larger scale, each to be followed in turn by illustrated descriptions of the stone-cutting.

When making the full-size drawings on the drawing platform or floor, nothing but the actual lines required to produce the moulds need be shown. In the detail drawings reproduced, however, a little more than is actually necessary for mould-making has been shown.

Exterior Ashlar Dome (Fig. 2)

The exterior of this dome being the only part visible after completion, the arrangement of the jointing has to be carefully designed in conjunction with the moulded panels and ribs.

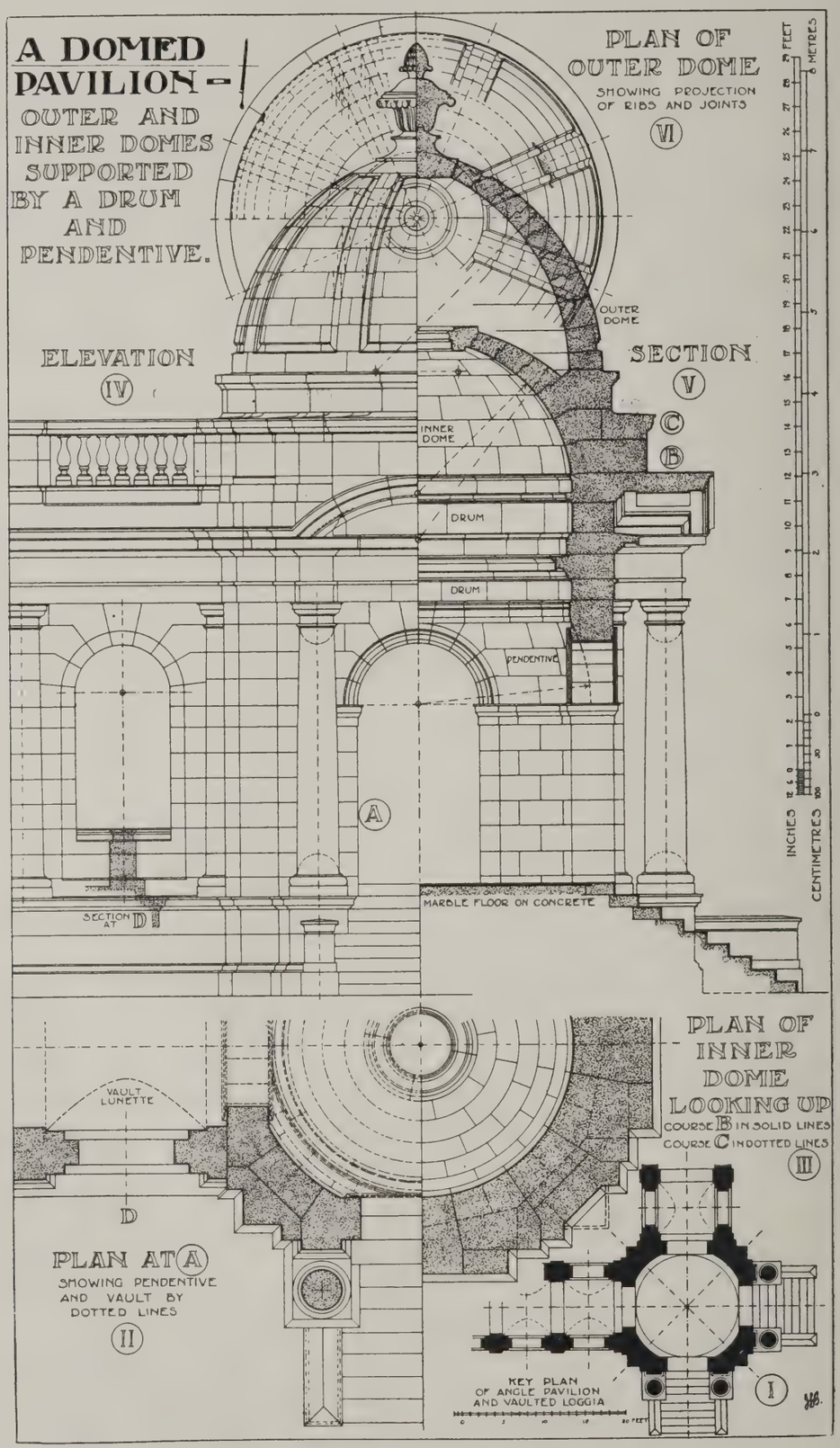
Draw the vertical axis of the dome, and describe in plan fully a quarter-circle with radius 7 ft. 7 in., representing the extremity of the dome at its base.

Set up, in section, the height of the exterior curve, (9 ft. $1\frac{1}{2}$ in.), find the centre of the arc, and draw the extrados. Now mark off the thickness of the dome at its base (1 ft. $4\frac{1}{2}$ in.), and at the top (7 in.), the centre of the segment being determined, the intrados can be drawn.

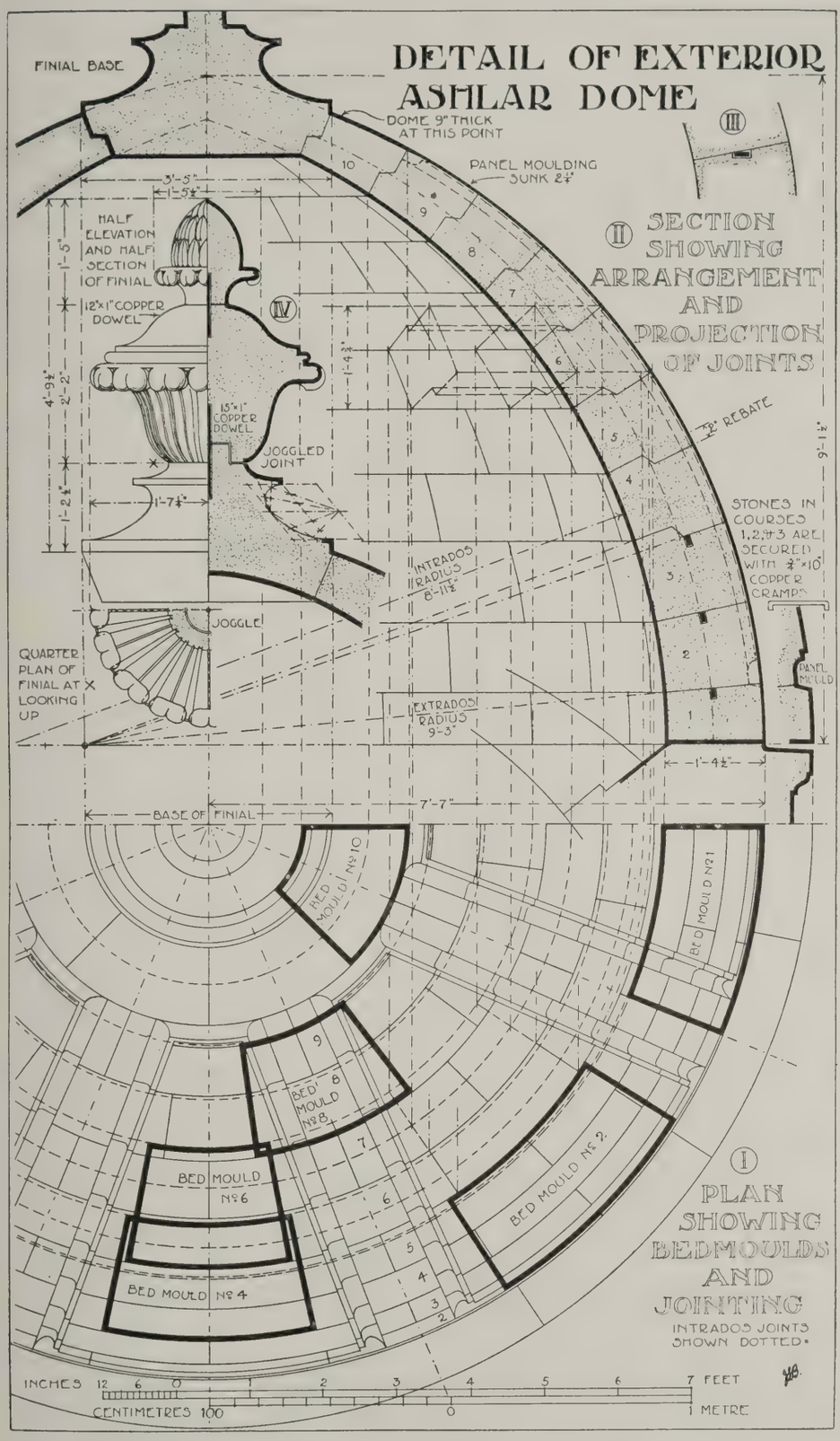
On the extrados set out the uppermost conical bed-joint by marking off from the axis half the diameter of the finial base, and the lower bed-joint by marking off 10 in., the height of course No. 1. These and all the other joints are normal to the extrados. The other courses are now spaced out at equal distances, and the joints drawn where required. A curve is drawn approximately in the centre of the thickness, and where this cuts the radiating joints the amount of the rebate—2 in.—is set off. The inner portion of the radiating joints is drawn from the same centre as is used for the outer part. The rebate is made with a slight bevel, this form having an advantage over a square rebate when the stones are being set. The formation of this rebated joint entails additional labour, but it is of great assistance when the stones are being set, enabling this to be done without the use of elaborate centring. The depth of the panel moulding is shown on this section by dotted curves, which are concentric with the extrados.

In courses one, two, and three, copper or bronze cramps $\frac{3}{4}$ in. by $\frac{3}{4}$ in. by 10 in. long are inserted in the upper beds to tie together contiguous stones at every vertical joint.

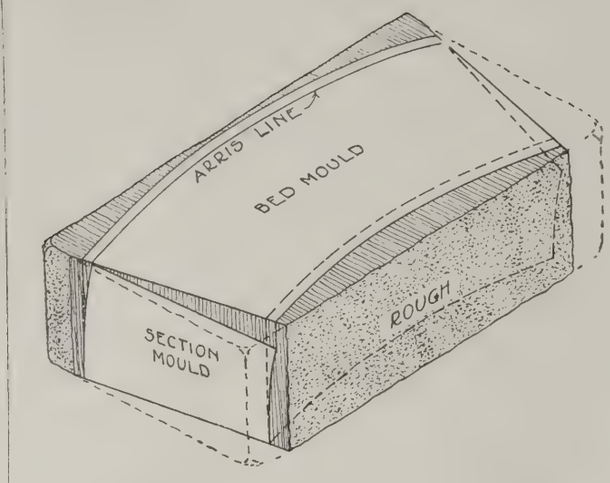
The finial surmounting the dome is made up of three parts connected with copper dowels embedded in cement. The weight of this finial may be reduced slightly by roughly



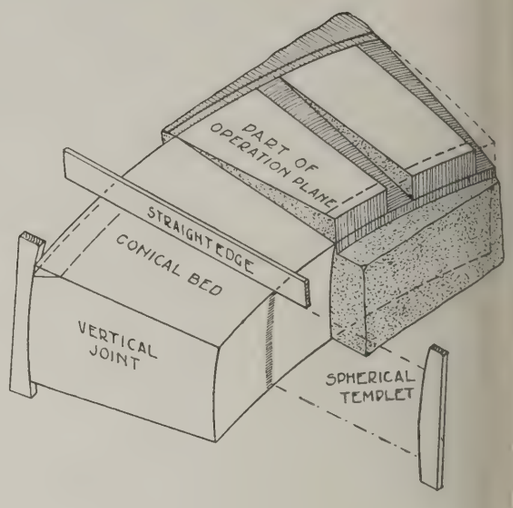
1. PLAN, ELEVATION, AND SECTION OF DOMED PAVILION.



2. OUTER DOME: ARRANGEMENT AND PROJECTION OF JOINTS, AND PLAN OF BEDMOULDS AND JOINTING.



3.



4.

removing a part from the interior as shown in the half-section of the finial.

The section of the dome now being completed, the arrises of the conical beds can be projected into plan, those on the extrados in solid lines, and those on the intrados by dotted lines.

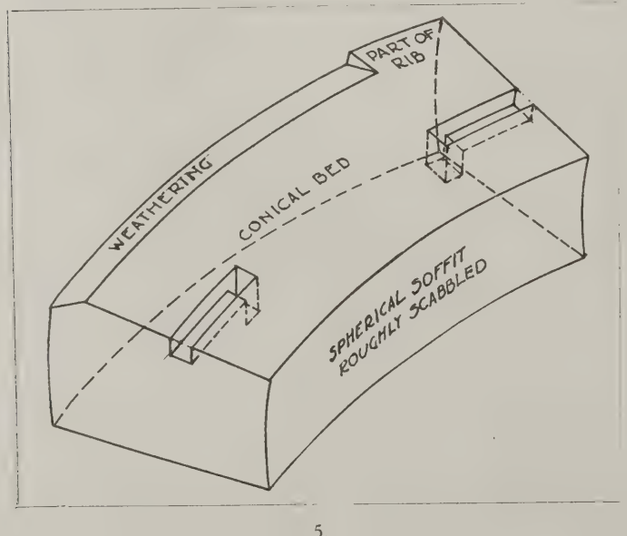
Before the vertical joints can be arranged, the ribs and panels have to be drawn.

Space out four equal divisions round the base of the dome in the quarter-plan, and draw lines converging to the centre. These will be the centre lines of the ribs and panels. The amount of taper to be given to the ribs and panels should be carefully considered. Too much taper may readily be given to the ribs, which would result in a very weak effect. As shown in the plan I, the width at the upper ends of the ribs is three-fourths that of the lower ends—9 in. and 12 in., respectively, the sunk moulding (4 in. wide) being parallel to the sides of the ribs.

The vertical joints can now be set out, and it is only by trying alternative arrangements that a satisfactory design for the jointing is obtained.

In the quarter-plan, the first course is divided into four equal parts, the resulting stones being of a convenient length—3 ft. Thus there will be sixteen stones cut to bed-mould No. 1.

In the second course there are eight stones similar in length—3 ft. 4 in.—to the bed-mould No. 2; the other eight (each containing the lower portion of a rib) are about 2 ft. 7 in. in length. The one bed-mould will serve for both lengths by having the shorter length inscribed on the bed-mould.



5.

Courses three, five, and seven, like number one, divided into sixteen stones of equal length, there bei joint in the centre of each panel and each rib.

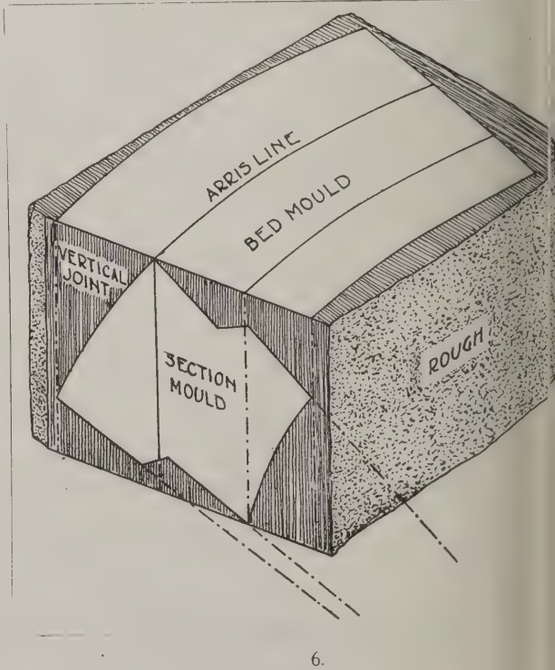
Courses four and eight, like number two, have each stones similar to the bed-mould, and eight a few in shorter. Course six has eight similar in length to the mould, and eight (containing part of the rib) a few in longer. Course nine is made up of eight stones with j at the centre of each rib. Course ten consists of stones of equal length and shape.

It will be observed that the bed-mould in each ca simply the overall plan of the stone. When several st are identical in size and shape, the quality of such sim stones should be marked on the mould and on the full drawing.

A few of the vertical joints are shown in elevation the projection of these is not necessary for the produ of the moulds.

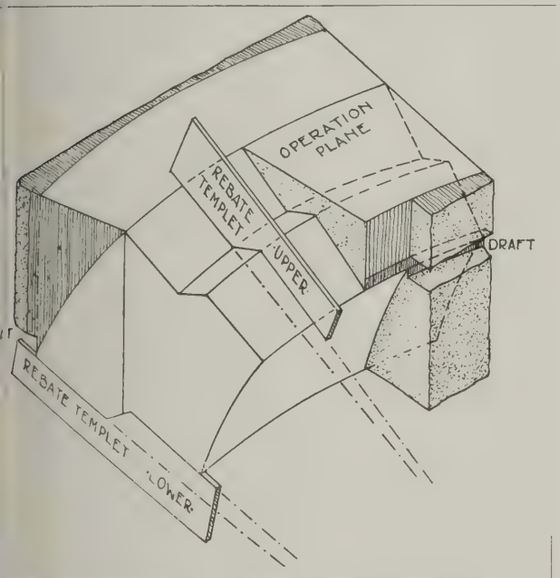
Exterior Dome, Stone No. 1

As a rule, it is more economical to gauge all the ston each course to the exact height of the respective st moulds by working a top and bottom bed with a pl machine. If a machine is not available, begin by wo the bottom bed, on which scribe the bed-mould—see F



6.

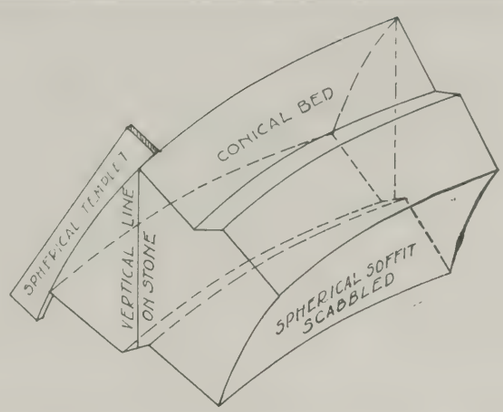
ght angles to this bed cut the two vertical joints, on of which scribe the section mould. Bring the stone to allel thickness by working an operation bed on the top exact height of the section mould. The greater part s bed need only be roughly scabbled, but the part ining the arris should be cleanly cut. Apply the bed- l on this plane and scribe the lines required. Square from the inner arris line on the top bed, form a sur- on which the soffit arris can be gauged at its correct from the top bed—Fig. 4. The conical bed can now rked by running radial drafts between the interior xterior arrises guided by a straight-edge. Clean off ıter spherical surface by cutting radial drafts to the ve templet taken from the convex edge of the section l. On the extrados gauge the depth of weathering, ut this neatly, taking care to leave the part of each which forms the bed for the rib—see Fig. 5. The os is formed by the aid of the convex templet shown, s the intrados is not at all visible when the dome is eted, this surface may be left roughly scabbled. nking the recesses for the cramps the stone will be eted.



7

Exterior Dome, Stone No. 6

in by working the top operation bed, and on it scribe ch of the bed-mould as is required. Avoid needless on this bed, as all that is left of it after completion upper arris of the conical bed. At right angles to eration bed cut the two vertical joints, and apply the ı mould accurately by ensuring that a vertical line— usly scribed on the mould—stands directly over a line scribed on the stone at right angles to the top see Fig. 6. Bring the stone to the height of the sec- ıould by working the lower operation bed. On this ply the bed-mould, adjusting it to correspond with ction mould already drawn on each vertical joint. ink a draft to contain the soffit arris of the upper l bed by applying a templet taken from the corre- ng arris in plan or on the bed-mould—see Fig. 7. down the vertical surface which contains this arris, uge the arris line from the top bed. To form the conical bed with the rebated joint, two straight-edges plets of stout zinc or sheet iron are cut accurately form of the rebate as given by the section mould. these will serve for all upper, and one for all lower l beds, the working edges being radial as shown by lines in Fig. 7. Radial drafts may now be cut, d by these rebated templets, between the interior terior arrises. The lower conical bed will be cut in a manner by first sinking a draft to contain the



8.

extrados arris. Work the vertical cylindrical surface below this draft, and gauge in the arris line parallel to the bottom bed. Cut the lower conical bed aided by the lower rebate templet in a similar manner to that applied to the upper bed. Now remove the surplus material on the intrados, cutting radial drafts to the convex templet of the intrados curve. This surface need only be roughly scabbled. Finally remove the surplus material on the extrados, and clean off the outer spherical surface, assisted by the concave templet of the extrados curve. Fig. 8 shows the finished stone.

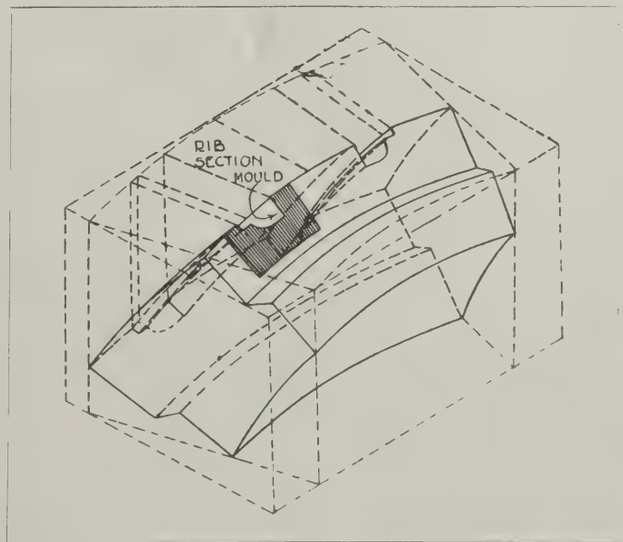
Exterior Dome, Stone No. 8 (see Fig. 9)

On the bed-mould for this stone transfer from the full-size drawing the taper of the rib in so far as it applies to this stone. The preliminary operations on this stone are similar in all respects to those for stone No. 6, already described. The width of the rib and mouldings is transferred to the upper and lower arrises of the extrados, and by the use of a flexible straight-edge the necessary lines are inscribed on that surface. A rib section mould, or a sufficient part thereof, is inscribed on each of the conical beds, thereby enabling the mouldings to be neatly cut.

Inner Dome (Fig. 10)

Draw the axial line of the dome, and with radius 6 ft. $2\frac{1}{2}$ in. describe in plan a quarter-circle representing the interior of the dome at its base. By setting off the height—3ft. $3\frac{1}{2}$ in. —of the upper part of the supporting drum, the bottom bed of the inner dome is defined.

The contour of this dome is purposely made a little lower



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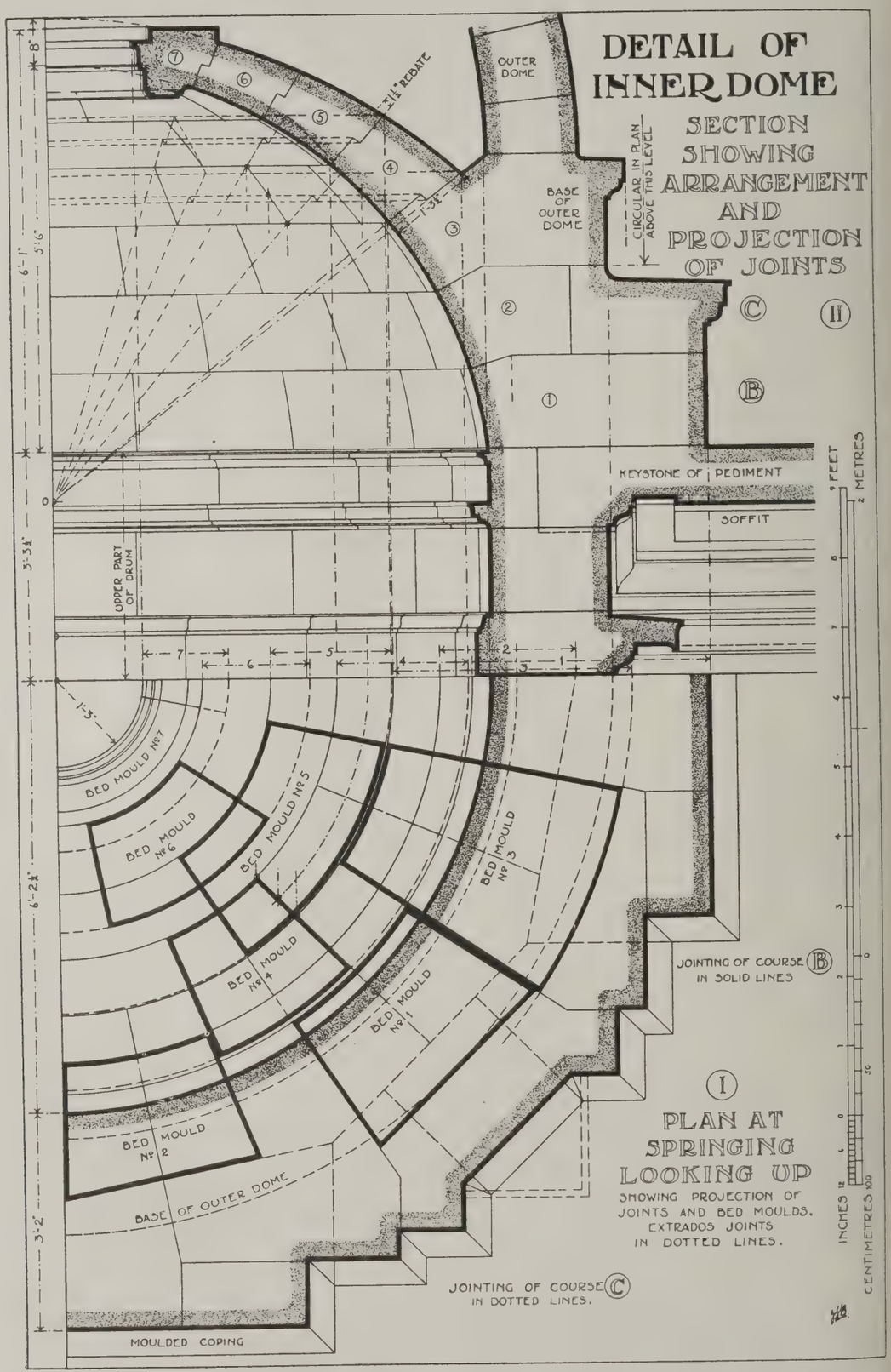
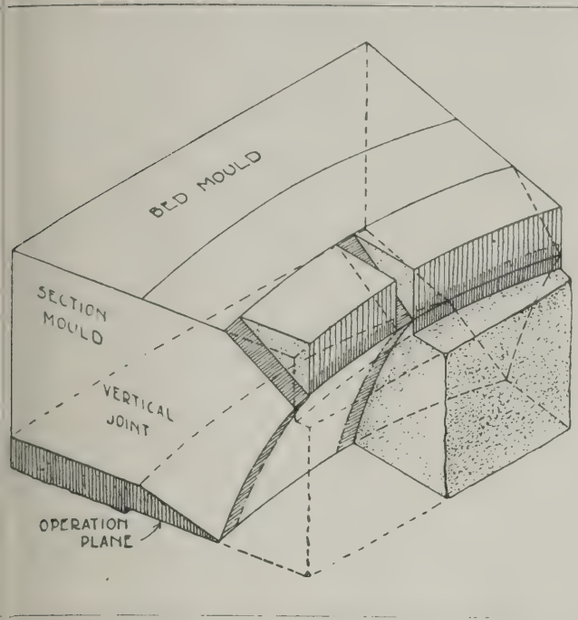


10. INNER DOME: SECTION SHOWING ARRANGEMENT AND PROJECTION OF JOINTS, AND PLAN AT SPRINGING, LOOKING UP.



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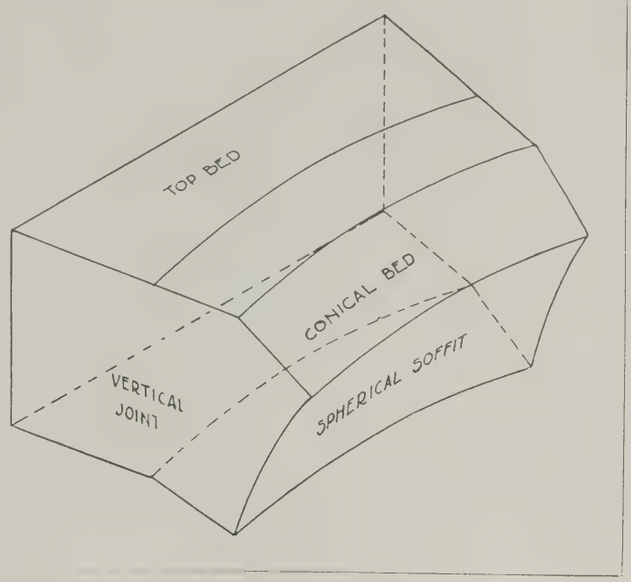


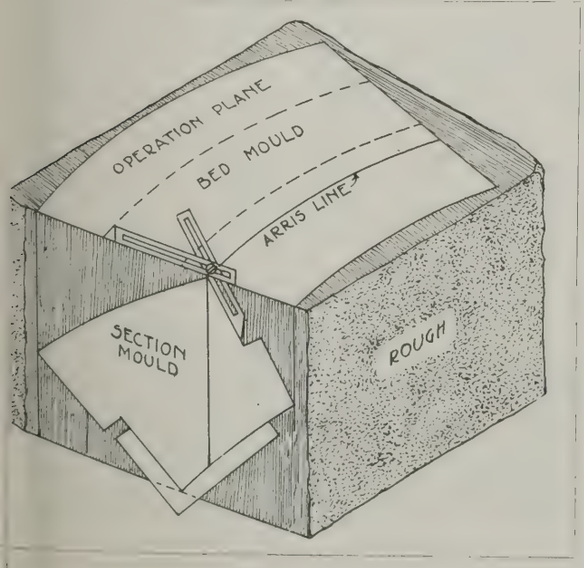
12.

...n a semi-circle, and by setting up the dimension—5 ft. 6 in. ...o the crown of the intrados the centre, O, of the segment, ...eadily determined.

Now draw in section the moulded ring at the crown of ... dome, the height to the lower edge being 5 ft., and ...ide the intrados curve into a suitable number—say, ...—courses of convenient width. In spacing out these ...rses it is advisable to make the lower courses slightly ...ler than those near the crown, because in viewing the ...face of the dome from below the width of the lower ...rses is slightly foreshortened.

Draw the joints normal to the intrados curve, setting off ... thickness—1 ft. 3½ in.—of the dome at the joint 3–4, ...t about 8 in. at the crown. The 1½ in. rebated joint can ...v be drawn midway between the intrados and extrados. The jointing of the mass of masonry about the springing ...uld now be drawn, and the arrises of the bed-joints pro-...ed into plan, the intrados joints being shown by solid ...s. Each course is numbered in the section, and the ...rses in plan also have numbers which correspond.

When setting out the lengths of the stones of the courses in plan it is prèferable—for the sake of appearance—to arrange as many of the courses as possible to have the same number of stones, but care should be taken not to have any of the stones too large for convenient handling, or so small as to be out of scale with the structure.



13.

In this design, courses one to four inclusive have sixteen stones in each. Courses five and six have eight stones in each, and the ring consists of four stones.

As all the stones in each course are alike in length, one bed-mould only for each course is necessary, as already explained. The quantity of such similar stones required should be marked on the moulds, and on the full-size drawing.

It will be observed that in courses one and two the stones are not all alike at the back part where they bond with the surrounding masonry.

Inner Dome, Stone No. 2

Begin by working the top bed, the greater part of which will remain when the stone is completed. Scribe the bed-mould, and at right angles cut the two vertical joints on which the section mould No. 2 is scribed—see Fig. 11. The vertical joint at the back of the stone may also be cut at this stage, and an operation plane formed to contain the soffit arris of the lower conical bed. Complete the upper conical bed and the soffit by cutting radial drafts as already described in the stone-cutting for the exterior dome. Turn the stone over to rest on its top bed, and sink the lower level bed to the depth given by the section mould. Scribe on this bed the curve of the upper edge of the conical bed, and form the latter by cutting radial drafts. Fig. 12 is a view of the finished stone.

Inner Dome, Stone No. 4

Work the upper operation bed, and on it scribe the bed-mould as in Fig. 13. It will be observed that all this bed except the upper arris of the conical bed will ultimately be removed. Cut the vertical joints, scribe the section mould, and form a small part of the lower operation plane, on which scribe the required arris line. The subsequent operations may be carried out as already explained in dealing with stone No. 6 of the outer dome, but it is proposed to adopt an alternative method involving the use of bevels.

(To be concluded.)

R.I.B.A. Exhibition

An exhibition of Contemporary British Architecture will be held in the galleries of the Royal Institute, 9 Conduit Street, W.1, from November 1 to December 16. The following arrangements have been made for the organization of the exhibition :—

1. All architects in the British Empire are invited to submit their work.

2. Work that has already been exhibited elsewhere will not be excluded.

3. Exhibits must be confined to works executed or illustrations of works projected since the beginning of the twentieth century.

4. All exhibits must be framed and may be glazed.

5. There is no limit to the number of works which may be included in one frame.

6. Models will not be accepted for exhibition.

7. Exhibits may consist of photographs, elevations, perspective drawings, and small scale plans. The exhibitor may choose whether he will send any or all of these. Photographs of drawings are admissible.

8. As the available wall-space is very limited it is anticipated that not more that 15 sq. ft. of wall-space (inclusive of frames) can be allotted to any exhibitor.

9. Charges for packing and transport of exhibits to and from the exhibition must be defrayed by the exhibitors.

10. An insurance policy will be taken out for the exhibits while they are in the custody of the R.I.B.A., but the R.I.B.A. will incur no legal liability for loss or damage.

11. The last day for the receipt of drawings and photographs will be October 7, 1922.

12. All exhibits not accepted must be removed by exhibitors not later than October 22, 1922.

13. The exhibition will be open to the general public (free) between the hours of 11 a.m. and 6 p.m.

14. There will be a Press View on October 30, and the Private View and Opening will take place on November 1, 1922.

Bramshott Golf Clubhouse

Bramshott Golf Clubhouse is erected from the design of Mewès and Davis. It stands on the summit of a hill, and is surrounded by magnificent scenery. There are no houses of any sort near. The portion built by Mewès and Davis was added to the old house, which can be seen at the back of the opposite Plate, but in reconstruction this part of the house became a cloakroom and lavatories. The new building is carried out in rough-cast, the walls having a rough trowel finish which gives them an interesting texture; the roof is covered with sand-faced tiles, and the columns supporting the veranda are executed in teak. The ground floor contains two dining-rooms, a club room, a dressing-room, a lounge, bar, and kitchen quarters, while upstairs there are twenty-two bedrooms, with bath-room accommodation. The building was executed by Messrs. F. G. Minter, of Putney.

The Theatre Exhibitio

The Theatre Exhibition, which w recently held with great success Amsterdam, is being transferred London. Several galleries of the Victo and Albert Museum are being set asi for this exhibition, which it is hoped w open early in June.

The authorities of the museum responsible for all matters relating administration. A fund to cover e penses is being raised by the Briti Drama League, and in all questio relating to selection, decoration, hangi etc., the museum is being assisted a advised by special committees.

The Selection Committee hopes th artists who have done work for the thea will submit drawings or designs (scenery, stage-setting, costume, etc.) n exceeding six in number. These dra ings should be labelled "Internatio Exhibition," and delivered to the Victo and Albert Museum on any day up to a including April 30.

Those who wish to submit a mo (which must not exceed half-inch sca should apply in the first place to t General Secretary, Mr. Martin Hard R.E., Victoria and Albert Museu S.W.7, who will be glad to give inform tion on this and other points.

An application form, which should signed and sent with exhibits, or bef their dispatch, will be supplied, request, by the General Secretary.

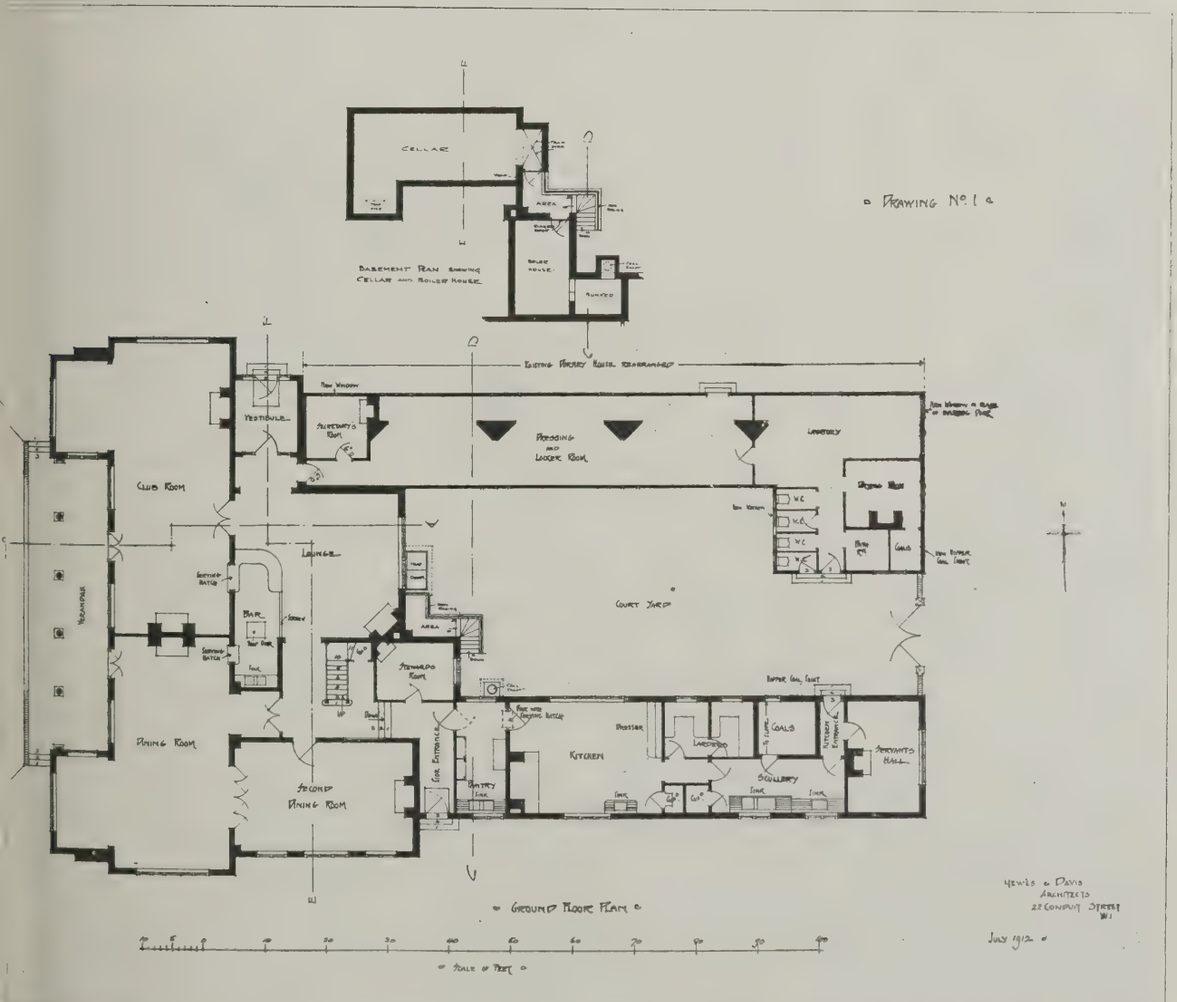
This most excellent exhibition, timately associated as it is with the stu of architectural design, is certain to ple and interest a great part of the professi Some architects will doubtless have st designs on show at the exhibition.

GOLF CLUB HOUSE, BRAMSHOTT. SECOND DINING-ROOM.
MÈWES AND DAVIS, ARCHITECTS.

Current Architecture. 154.—Bramshott Golf Clubhouse

Mewès and Davis, Architects

Bramshott Golf Club stands on the summit of a hill, overlooking very fine scenery. The walls are of rough-cast and the roof is of sand-faced tiles. The veranda, which is a delightful feature of the design, opens on to the dining-room and clubroom. Upstairs there are bathrooms and twenty-two bedrooms.



GOLF CLUB HOUSE, BRAMSHOTT. MEWÈS AND DAVIS, ARCHITECTS.

The New Drury Lane

THE reconstruction of Drury Lane has now been completed, and the illustrations which we give in this issue show the theatre as it appears in its remodelled form. Parts of the old building, which was designed by Benjamin Wyatt in 1812, have been retained, notably the Grand Vestibule, the Rotunda, the Royal Staircases, and the Grand Saloon, all these features having been redecorated. The actual work of reconstruction (which has been carried out from the designs of Messrs. Emblin-Walker, F. Edward Jones, and Robert Cromie, A.R.I.B.A.) relates mainly to the auditorium, which is entirely new.

The massive circular walls of the old auditorium have been removed, and within the shell consisting of the outer walls and the old roof have been constructed three new tiers of seats (in place of the four tiers of the old house) with greatly increased accommodation. From the point of view of the audience the new seating arrangements are perfect, a clear view of the stage being obtainable from every part of the house.

The decorative scheme is based on the work of the Empire period.

Unfortunately, plans of the theatre are not available for publication, but the following description will convey some idea of the disposition of the various apartments and their decorative treatment.

From the Foyer, which has been redecorated to represent French stuc, and fitted at each end with box offices of mahogany, we enter the Rotunda, a well-proportioned apartment also carried out in stuc treatment, with columns decorated to represent lapis lazuli supporting a coffered dome, the panels of which are in shaded tones of blue and grey.

Passing through the Rotunda we reach the Grand Staircases, which lead off left and right, and are known, respectively, as "The King's Side" and "The Prince's Side." On the first landing of the staircase on the Prince's Side hangs a very fine painting by Romney, entitled "The Death of Lucretia," and at the foot of the King's Staircase is another old master.

The French stuc walls of the staircases are enriched with six hand-painted tapestries in the Gobelin manner, depicting scenes from Shakespeare's plays "As You Like It," "Love's Labour's Lost," "Twelfth Night," "Henry VIII," "Richard II," "Taming of the Shrew." These are in sunk panels and framed in bronzed reeded frames. On the first landing of the staircase is the Grand Saloon, now redecorated in tones of beige and gold.

From the Rotunda there is also an approach to the stalls by means of two descending staircases. These converge in corridors which lead into the stalls. These corridors, together with the stalls saloon, are also decorated in stuc effect.

Within the auditorium the boxes
dominating feature. The imposing
Box, the front of which is embell
with the Royal Arms, is on the "
circle" level, and the importance o
emphasized by giving it a much g
height than the surrounding boxes,
the fronts of the boxes lapis
columns rise from rouge royal m
bases and stand out against the b
gilt of the balconies.

Another feature of the decoratio
the fronts of the boxes is the seri
plaques representing the Muses,
the manner of Flaxman. These a
white on a ground of Wedgwood bl

A feature of the front of the dress
is the series of panels in which are
blazoned the names of the great a
who have been associated with
Lane Theatre in the past.

The curtains and draperies are ext
ly handsome. The tableaux cu
with its pelmet and all the box drap
is of a rich Chinese yellow velve
pressly woven for this theatre.
velvet is embroidered with a design i
Empire style in azure blue and gold

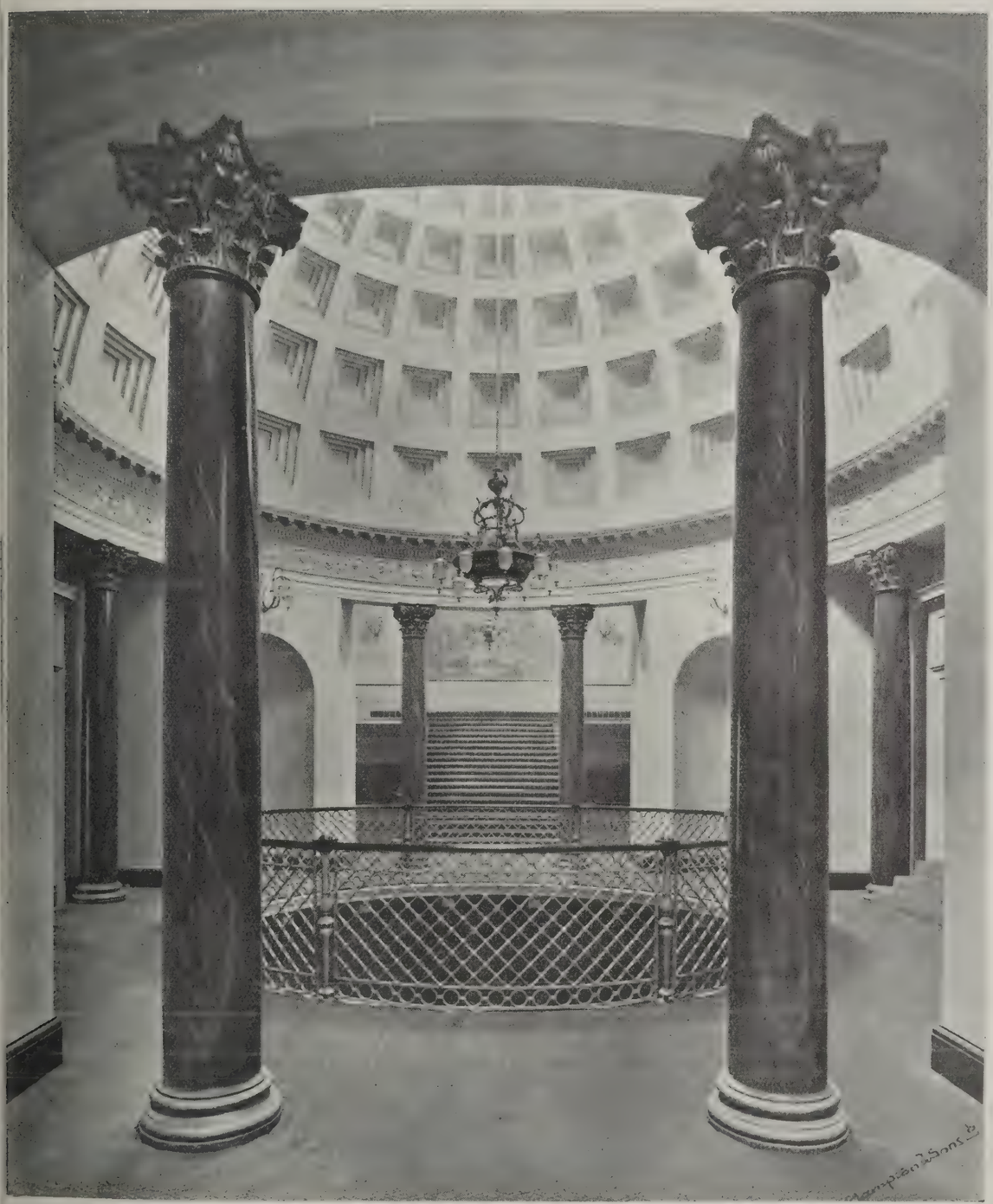
The proscenium arch rises from
of black marble, which is relieve
bands of Sienna. In contrast with
are the mouldings of the arch, whic
coloured to represent lapis lazuli.

At the sides of the auditoriun
some decorative panels after Fragc

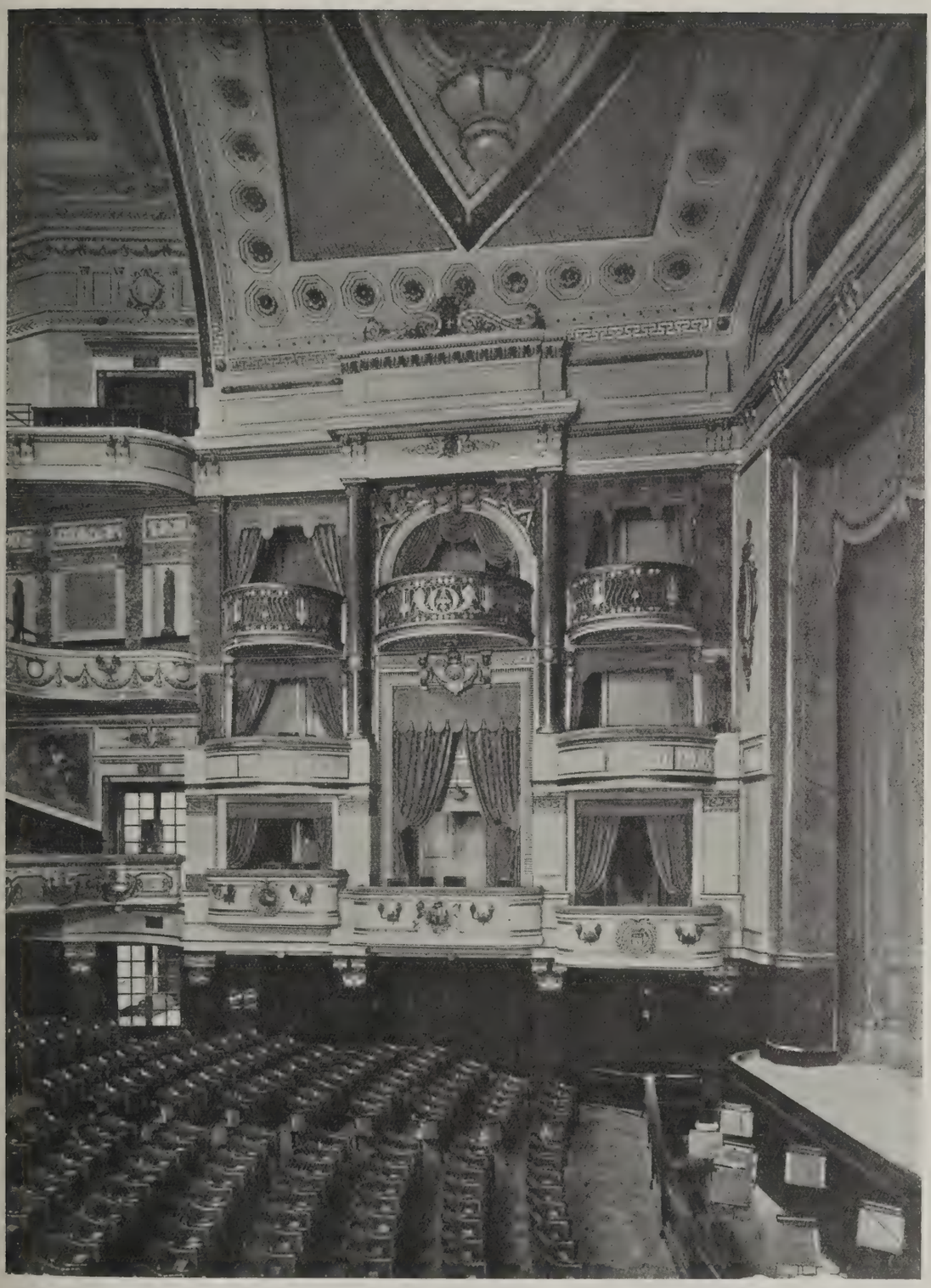
THE GRAND SALOON.

Drury Lane Theatre: The Rotunda

Benjamin Wyatt, Architect



The Rotunda is one of the old parts of Drury Lane. It was designed by Benjamin Wyatt in 1812, but has, of course, been redecorated with the rest of the building. In it are to be found the statues of Shakespeare, Garrick, Kean, Balfe, and Henry Irving. The above illustration shows the view looking through the Rotunda to the King's Staircase.



THE NEW DRURY LANE THEATRE: VIEW IN AUDITORIUM, LOOKING TOWARDS THE ROYAL BOX.
MESSRS WALKER AND JONES AND ROBERT CROMIE, ARCHITECTS.

reproducing many of his familiar designs, notably his famous "Fontaine d'Amour," now in the Wallace collection.

Throughout the entire house the carpets are of heavy pile Wilton, in an attractive shade of petunia, taken from an antique Chinese rug. The other dominating colours of the scheme are pearl-grey relieved with Italian pink and Wedgwood blue, in combination with bronze-gilt to all the carved and modelled enrichments.

The works carried out by Messrs. Hamptons, in addition to the internal decorations and furnishings, include repainting and redecorating the whole of the exterior, all the rest of the redecoration, all interior painting of offices, staircases, exits, entrances, etc., and all the carpetings and hangings throughout the theatre.

The whole of the enriched and ornamental fibrous plasterwork throughout the auditorium was modelled and manufactured by Messrs. F. De Jong & Co., Ltd. The special feature of this scheme is the elliptical panelled coffered ceiling over the box façade, with its three domes enclosed in a lozenge of laurel ornament, the sprandrils being filled with emblematical modelling, and the whole surrounded with an outer border formed of deep octagonal coffers.

The large tympanum under the above and surmounting the proscenium opening comprises a modelled bas relief panel containing the Royal coat of arms.

The back ceiling, circle fronts, and side wall panelling are also notable for their decorative plasterwork.

The marblework in the theatre, which was executed by Messrs. Chas. Walker & Co., is as follows : —

The two sides of the gallery are in a new rose-colour marble recently imported from Spain, called Rosado. At the side of the first circle are pilasters and dado of various marbles, and pilasters and bases to the box façades. The entrance hall floor is in Sicilian and black of the usual size squares, but laid in a dignified pattern. There is a considerable amount of skirting in Belgian black in various places, including the Rotunda, the corridor leading up to the stalls, and the stalls saloon.

The walls of the Royal and Grand staircases, Rotunda, corridors, and entrance hall are finished to imitate stone. The work was carried out by the service department of the Aerograph Company.

The electric-light fittings, which were designed and manufactured by the General Electric Co., Ltd., conform with the "Empire" character of the decorative scheme. The auditorium is illuminated from the ceiling by a central fitting and five smaller ones of similar type. The main fitting is arranged for thirty lights, is 8 ft. in diameter, and weighs 15 cwt. It consists of a large upper corona surrounded by six three-light flambeau brackets, a lower corona completing a panelled basket, the whole being carried out in cast brass finished a rich dark ormolu relieved with blue enamel enrichment. The panels are glazed, with heavy cut plate glass, and the fitting is completed by a lower cut-glass bowl.

The five subsidiary fittings are of similar design, but are without the upper corona and brackets.

Numerous two-light flambeau brackets on the box and circle fronts give additional illumination to the auditorium, and between the boxes are installed four large standards on black marble bases with ormolu enrichment.

In the boxes, bowl pendants, finished dark ormolu and blue with silk cord suspension and "Equiluxo" glassware, are installed. Ceiling fittings of the same type provide the main illumination for the circles, and are supplemented by three-light flambeau brackets applied to the front of decorative pilasters.

The main entrance contains a central gilt electrolier with cut plate glass panels and bowl and six outside arms carrying pendant lights. On the staircase the newel lights are rich gilt with flambeaux. In addition to the main fittings already described, subsidiary fittings such as "Exit" signs, ceiling fittings in lobbies, police lights, etc., were provided by the G.E.C., who also supplied all the lamps and cables used in the theatre, Osram gas-filled and vacuum-type lamps being exclusively employed, and the wires and cables being manufactured at the Pirelli-General works at Southampton.

Heating and ventilation are on the "Plenum system," the air being drawn from the outside and, before passing into the theatre, thoroughly washed and warmed to any desired temperature. Subsequently it is forced by a large centrifugal fan through underground and rising ducts to all parts of the auditorium.

The theatre has been equipped throughout with the very latest suction cleaning plant for sweeping the carpets, upholstery, hangings, curtains, floors, walls, etc. In addition, the stage, from the floor up to the grids, is cleaned by suction. In the machine-room is a cleaning plant which picks up the daily accumulations of dust, cigar and cigarette ends, match sticks, and such, conveying them, on a current of air, to a central dustbin under the stage.

The electric light, power, signal bells, and telephone installations, carried out by the staff of the theatre, employed fifteen miles of cable of various sizes and 60,000 feet of tube. There are 5,000 lamps on the stage, aggregating 40,000 candle power.

The reconstruction of the interior of the theatre has cost approximately £150,000.

Following is a complete list of the sub-contractors for the work :—

Moreland, Haynè & Co. (steelwork); F. De Jong & Co., Ltd. (fibrous plaster); J. Jeffreys & Co., Ltd. (heating and ventilating plant); Hampton and Sons, Ltd. (decorations, carpets, and draperies); M. Stephany (seats and furniture); General Electric Co., Ltd. (electrical fittings); Merryweather and Sons, Ltd. (safety fire curtain and fire hydrants); Mather and Platt, Ltd. (automatic sprinklers); Stitson, White & Co. (sanitary fittings, drainage, etc.); Sturtevant Engineering Co., Ltd. (vacuum cleaning plant); D. Bianco and Sons (joinery); Chas. Walker & Co. (marblework); Bullivant Engineering Co. (scenery gear); Acme Flooring and Paving Co., Ltd. (stalls and pit flooring); Wainwright and Waring, Ltd. (ornamental railings); The Reliance Telephone Co., Ltd. (house telephones); Excel Asphalte Co., Ltd. (roofing); Self-Sentering Expanded Metal Works (floors and trussit for walls); C. J. Hyde (builder). Mr. Adrian Collins, Assoc.M.Inst.C.E., acted as consulting engineer.

R.I.B.A. Street Architecture Award

With a view to encouraging excel of design in street architecture R.I.B.A. have decided to examine ally the buildings erected or comp during the year ending Decembe within a radius of four miles from Ch Cross, London, and to award a pre for the most meritorious external d

The architect of the premiated bu will receive a bronze medal presente the R.I.B.A., together with a di signed by the jury of assessors. Fo present the jury propose to hold in re the question of affixing devices to miated buildings.

The conditions are as follows :—

(*a*) The building must front to a s road, square, or court to which the p has access within the four-mile ra The award is intended for a street f as opposed to churches or public b ings, for which a separate medal m awarded. (It may be possible to e the system of awards later on to pr cial cities and towns in conjunction the Allied Societies.)

(*b*) The architect is the person whose design the building has executed.

(*c*) Any Member or Licentiate o Royal Institute shall be at liber nominate any building (not excl his own work) for consideration b jury. Forms of nomination wi issued with the first two numbers " Journal" of the R.I.B.A. in each se These forms, which must be accomp by an elevation to scale and a p graph of the exterior of the com building, for the information of the must be in the hands of the Sec R.I.B.A. by the end of February These documents will be returned riage paid) to the sender after the has been made. The jury do not themselves to confine their selecti the buildings nominated.

The award will be made by a ju five, appointed by the Council Royal Institute, and compos three architects, one member of the Academy, and one honorary Fellow Royal Institute. The term of ap ment will be for three years. making their award, the jury will p ally inspect such of the buildin they deem worthy. The award w final and binding on the Council Royal Institute and the architect cerned.

The presentation of the premium architect will be made annually meeting of the Royal Institut submitting the above conditions th desire to inform the Council that th not yet in a position to select an for the design of the medal, but tha hope to make a recommendation this point later. For the prese jury propose to hold in reserv question of affixing devices to pre buildings.

The jury for the award for the p year consists of the Earl of Crawfo Balcarres, Hon. F.R.I.B.A., Cha Sir Aston Webb, P.R.A., Past Pr R.I.B.A.; Mr. Paul Wate P.R.I.B.A ; Sir Reginald Blomfield Past President R.I.B.A.; and Mr. I Dawber, Vice-President R.I.B.A.

ne Architect and the Structural Engineer

R. OSCAR FABER, B.Sc., A.M.I.C.E., reading a paper on the above subject, before the ester Society of Architects, said s the complexity of modern in- increased, and as the fields entific discovery and invention ed, so the necessity for specializa- ew more and more emphatic, and ound a secession of some of the ns originally performed by the ct to members of a growing num- professions, such as the quantity or, for instance. Proceeding, he he ideal architect, I suppose, would n addition to his comprehensive ion and deep feeling in matters of d architecture, a complete and knowledge of all the properties of materials, and could carry out all iny details of his structure. In e, however, he will advise his o employ the services of a specia- uch as a consulting electrical r, to perform work, the technical of which he frankly admits to be his province.

dependency of the Professions

ractice life is too full, and one's l span so short that one is forced ute much of one's detail work to who, by reason of their continued uch with special branches, become alists," whether they be assistants sultants.' This being the case the professions, it will be seen that s also amongst the professions; and gineering and architectural pro- s are so inter-dependent that really ork can only be created by close ration and sympathy between

as an architect will feel the need ert advice upon matters of struc- ngineering when called upon to a large building, so an engineer l the need also for an architect's assistance when called upon to a bridge, a viaduct, a dam, a r, or any other structure in which ngineering character materially tes the architectural.

llows then that in the majority of the combination of an architect structural engineer forms a very t force with which to tackle ns, and the closer the collaboration re effective and sincere the treat- since it is the outcome of the lated study and experience of

us consider the relations between ct and engineer. The consulting r can render the following service architect :—

repare for him complete specifica- nd working drawings of all the ring work in connection with the re, making all the calculations, bmitting them to the authorities tting them passed. To obtain , and deal with variations in the and contract as the work pro- to inspect materials and work- p from time to time, and on com- pletion to check the sub-contractor's account; generally, that is, to take the work and worry in connection with the engineering off the architect's hands.

The tendency in modern large buildings is to make them of steel or reinforced concrete framework which supports the floors and walls, etc. It is also customary to make floors and stairs of reinforced concrete, this material having many advantages for these purposes. These, and such further matters as foundations, retaining walls, strong rooms, bridges, chimneys, tanks, and many other details may form what are called the engineering portions of a structure.

Need for Early Collaboration

It occasionally happens that some structural alterations or modifications may occur to the engineer which would simplify the work, or in other ways effect economy. When this does occur it is best done while the plan is still in a more or less fluid state. This emphasizes the need for early collaboration.

As an instance, let us take the case of the design of the soffit of the ceiling for a ground floor in a bank building, where we have isolated columns, and large openings, while on the upper floors are smaller rooms forming suites of offices. It frequently happens that large flat slabs, showing no beams from below and the minimum of columns, are required, and up to certain sizes this presents no difficulties. Above these limits, which vary according to the loads and type of construction, it becomes necessary to introduce additional beams, and in general these beams must project below the soffit of the ceiling in order to have the necessary stiffness. This means either providing a complete false ceiling, or necessitates some rearrangment of the structural members. In such a case collaboration will show the best results, and the engineer may sometimes be able to effect an appreciable economy. In large open spaces very deep beams are occasionally necessary for stiffness, and this problem is particularly acute in structures such as theatres, which have, of course, as few columns as possible. The depth of beams necessary for stiffness is a point which is sometimes overlooked in planning.

Artist and Mathematician

One is led to consider where the demarcation between the functions of the architect and engineer will occur. One cannot draw any definite line, since there is much that is common to both, but in a sense we may, perhaps, say that the architect and engineer are respectively artistic and mathematical. There is, I believe, a tendency on the part of some of the architectural students of the present day to regard structural engineering as an unpleasant, but necessary, part of their curriculum, which, I think, is unfortunate, as, after all, fitness for purpose is one of the essential qualities of beauty, and is the essence of engineering, too.

The Question of Foundations

Foundations are designed to transmit concentrated loads from piers, columns, etc., to the ground, and have, therefore, to satisfy the following conditions :—

1. The bearing pressure on the soil must be within the safe load.

2. The bearing pressure on all footings should usually be equal, so as to equalize settlement and prevent cracks. In this country the actual settlement is often negligible, but this does not affect the principle involved. The safe pressure of the soil should be determined for each site, although frequently local authorities specify certain loads as permissible for certain local strata. Where the ground is bad two expedients are available. The footings may either be spread so as to reduce the load per square foot to a safe value, or the footings may be carried down to firmer strata, where greater load intensity is permissible, which of the two methods is the cheaper depending on local circumstances.

Taking the first case, it frequently happens that where columns are close together the spreading of footings causes the footings to join, forming what are known as "combined footings." This type of footing has also a special value where columns lie so close to the boundary of the property that they cannot have a wide base on one side. These footings are designed as beams or slabs, considered as supported by the columns and loaded with uniform pressure by the soil.

A logical development of this form, where the loads are heavy, and the soil poor, is to spread the footings until they cover the whole of the site, forming a raft. This also is designed as a floor supported by columns and loaded by the soil pressure. It needs beams between columns, or similar stiffening in exactly the same way as the floors, from which it differs only in the intensity of the loads.

Basements in Waterlogged Ground

The provision of basements and sub-basements sometimes necessitates placing the raft well below the ground line, and retaining walls are then necessary round the site; and where these are made monolithic with the raft—the whole structure becomes in effect a tank, carrying the building. If now the surrounding ground is waterlogged, there will be an upward force equal to the weight of water displaced, and if this is greater than the weight of the building it will float the building. This is very unusual, but may need investigation, and it may in extreme cases be necessary to allow the water to enter and flow into a sump and pump it out, thus lowering the water level outside the tank, and reducing the lift. Where there is solid ground fairly near the level of the basement floor it will probably be more economical to carry the columns down to it.

Foundations have also to be designed to carry the extra loads due to wind-pressure on the building. This increases the pressure on the lee-side, and reduces it on the windward side; and this is

especially important for low buildings, and for the top floors of tall buildings, where the weight of the building is less in comparison with the force of the wind-pressure.

Beams have to be designed for: (1) bending; (2) stiffness; and (3) shear.

1. In general the bending stresses are resisted by the tension and compression in the lower and upper flanges. The intensity of these is usually limited for steel beams to a value of $7\frac{1}{2}$ tons per square inch by by-law. Owing to the top flange being in compression it is under similar conditions to a column, and we must therefore make sure that it is strong enough to resist buckling. This is usually accomplished by making the width of the compression flange not less than one-thirtieth of its laterally unsupported length.

2. The deflection of a beam has usually to be limited, to prevent cracking of plaster, and so on. We find generally that the limiting value for ordinary work is that the depth of the beam must not be less that one-twenty-fourth of the span. In practice, particularly for office and domestic buildings, as the dead loads on a beam are usually applied slowly as the work proceeds, the actual deflection liable to crack the plaster which is placed last is that due to live load only. For supporting brick walls it is best practice to limit the deflections to $\frac{1}{360}$th of the span for spans up to about 12 ft., and $\frac{1}{500}$th of the span for spans from 12 ft. to 20 ft.

3. The web of a steel beam carries the shear and transmits loads from the top to bottom flange. It thus acts as a flat column, especially near the support. We must therefore make sure that the web is strong enough to carry these loads, and that it will not buckle. It sometimes needs stiffening under heavy loads. In addition to this, for built-up sections, there must be an adequate number of rivets to transmit the loads between members.

Hangers and Raking Columns

In some cases, where shallow beams are essential, they may be designed as supported by hangers from beams at a higher level, which must then be strengthened suitably. Such hangers can be hidden in the thickness of a wall or partition, while adequate means must be provided to stiffen the slung beam sideways, such stiffening usually being provided by the floor it supports.

Columns have to be designed to carry safely the superimposed loads transmitted by the beams with full allowance made for the bending effect of eccentric loading, such as is applied by unbalanced beams, or by brackets, etc. In steel structures, deflection of the beams under load does not affect the columns, as a rule, but in reinforced concrete structures, where the beams and columns are cast in one piece, deflection of the beams will cause bending of the columns, and this should be taken into account as well.

One usually finds that by-laws specify a maximum height from pavement level of the exterior wall face of a building beyond which the building has to be set back. One also finds that other people object to having their light blocked by the proposed building. It consequently becomes necessary sometimes to set back on certain definite lines. This may be done either by the introduction of mansard roofs, or by setting back the building sufficiently to enable a vertical wall to be built within the limits specified.

This introduces the application of raking columns, i.e., columns not carried down to the basement, or bent or cranked beams, or combinations of all three. Columns can be carried on beams, these latter being proportionately strengthened to carry the load of the column. Mansard roofs are frequently carried on raking columns or struts, and on bent beams. No special difficulties in design are introduced by the use of such members.

Economical Spacing

The spacing of columns and beams will depend on many different factors. In almost every case the positions of the columns depend on the site and the planning of the building, and are practically decided before the design has passed the planning stage. It does, however, happen sometimes that an open site is given for a factory building, and then there is more latitude in determining, which is the most economical spacing. The span of the main beams depends on the width of the site, and having given this, some idea of the best spacing can be found, depending on the relative costs of the various materials and their labour costs. The thickness of a concrete floor slab may be taken as an approximate guide to be one-twenty-fourth of the spacing of the beams, and thus the cost of this increases with the spacing. The cost of the beams will in general decrease as the number of beams is decreased, owing to more efficient use of the material. The cost of columns will also decrease as their spacing is increased, for a similar reason. Combining the three together, it will generally be found that there is a certain ratio of span of beams to spacing which will give the most efficient design, that is, the cheapest. There will, however, almost always be found local requirements which predetermine at least one of the dimensions: for instance, a works manager will lay down that 30 ft. is the best span for him to fit his machinery into, or he will call for varying spans, and so on. In each case the cheapest design can only be found by actually pricing alternative designs, or by the accumulated experience of many years' practice, which gives an instinctive judgment.

Advantages of Concrete

The chief properties of concrete are its great strength in compression, which increases with age, and its adaptability to many forms, sometimes called plasticity. It has many advantages for structural purposes of certain kinds in that it can be made waterproof, fire resisting, and in many cases, by utilizing materials on the site, can be more economical than any other material; furthermore, it does not need periodical painting. The great difference in its strength in compression and in tension, which are in the ration of about ten to one, make it unsuitable for use in portions of a structure subjected to tensile stresses, or bending stresses, but by the simple expedient of providing a reinforcement of steel which has a high tensile strength, embedding this steel in the concrete wherever such tensile stresses occur, as, for instance, in the lower flange freely supported beams, full advan may be taken of the compressive stre of the concrete; and the developme this has led to the extensive use of forced concrete for structures.

The strength of concrete is gove by a number of factors, chiefly the lowing: (1) The proportioning of "aggregate," (this term being appli the larger particles of the stone of w the concrete is made). In general particles should be graded, that is, sh vary in size, so that when pressed the moulds the spaces between should be as small as possible. denser the concrete the greater strength; (2) The proportion of cem (3) The amount of water present du the mixing; (4) The temperature at w the setting is allowed to take pl (5) The crushing strength of the sto broken brick, etc., used as aggregate

Water may percolate through con for various reasons. The concrete be porous, allowing water to flow thr it, or it may crack under tensile st these stresses may be produced by shrinkage associated with setting, cially when the concrete is allowed t out very rapidly. The treatmen render concrete waterproof may divided under three headings: (1) tegral treatment of the concrete; Subsequent treatment of the conc (3) Surface coating.

Sound-Proofing

With regard to sound-proofing, considerations which lead one to concrete dense, both for strength watertightness, tend to increase its sc carrying capacities. In buildings v concrete floors are practically univ owing to their strength and fire-resi qualities, sound-proofing is best att by means of air spaces, such as the vision of air spaces above a plaster ce cork or felt cushions, or indiarubber covering. Many concrete floors been erected which give no trouble sound transmission.

Condensation on walls or roofs of crete is sometimes cited as an obje to the use of concrete for domestic h ing. The inner and outer faces of a require entirely different properties.

The outside is subjected to dri rain, and must either be waterproo sufficiently thick and porous to reta the rainwater within its pores, ar give it up again to the outer air whe rain has ceased, otherwise dampnes show on the inside.

The interior of the wall is subject condensation whenever it is cooler the air in the room, and requires both absorbent, and of low thermal ductivity, so as to remain as near possible at the room temperature. of brick houses, even when plastered easily be made to show condensation painted or otherwise rendered no sorbent. Thus concrete affords a material for walls, as long as the surface is made dense and water and the inner made absorbent, su by the interior use of porous con especially when plastered. An air in the wall is, of course, a well-k means of reducing the thermal ductivity.

Correspondence

The Commercial Ideal: Mr. Cresswell replies to a Critic

the Editors of THE ARCHITECTS' JOURNAL.

—The statement in "A Trader's" n your issue for March 15, that the I have expressed on the above t provoke his resentment and are ted to rouse strong feelings in the of all self-respecting business men, ts itself to me as the triumph of ice over thought. I claim self- ing business men on my side in on with self-respecting men in other ons. "A Trader's" letter, how- erplexes me, for I have neither said plied any of the things he specific- jects to; I am in substantial agree- with most of the points he makes, e indications are that our attitude subject is essentially the same. ader," in fact, misunderstands and resents me.

ve neither said nor implied that rce is unworthy to "receive from nor that those who engage in trade ignity or need become obsessed aterial ideals; nor have I suggested ng so fatuous as that architects ot concerned to earn a living like people.

with *opposing ideals*, alone, that I ncerned. I have not said that ss men do this or the other; I have no charge against persons or voca- I have declared, only, that the ercial Ideal leads to certain things done, and I pillory those acts and, plication, the persons responsible m. The line between these oppos- als is not marked by any physical cations of mankind, but by ethical nces; the fight, as I have claimed, across mundane, but across spiritual s, and the idea of setting business one camp and professional men opposite, which "A Trader" attri- to me, is detestable to me, as ing the meanest kinds of snobbery ggishness; in being entirely unjust; ecause, to any observer of life or thizer with the aspirations of ity, it is sheer nonsense.

ve expressed nothing in a sense ry to this opinion, but, on the other have explicitly stated that nothing e was intended, or should be read, ly an attack upon persons or upon ons; and I set forth, with surely nt clearness, that what I deprecate growth of the Commercial Ideal to screditing of human aspirations; iscoloration of popular thought; ctimizing of the public, and the ement of the Arts.

ve raised no objection to the Com- l Ideal so long as its influences do tend outside the field of commercial urse. For all I know, bluff; spying de secrets; conspiring to surprise nticipate the enterprises of rival s; scheming to capture the cus- of your competitors; subsidizing rs to sell your own goods to the on of other manufacturers; form- gs to force up the price of the com- you deal in; organizing combines lersell and drive out of business traders; usurping the position due to a tried reputation by clamorous self-advertisement;—these principles, and many others of the same tendency, are the accepted usages in many fields of competitive trade, and may, for all I know, be salutary to commercial enterprise, or even necessary, if we consider that a firm which denied itself such privileges would be severely handicapped, and might be forced out of business altogether.

I offer no opinion on these matters; I do not know, and I do not care, whether such practices in trade and industry are a sign of good health or of disease; but, as a member of the public, the votary of an art, and the practiser of a profession, I *am* concerned that such influences should overflow the boundaries of commercial interchange, tend to establish the Commercial Ideal as a standard of thought and conduct in associations which have nothing to do with trade, and by deceitful craft and nefarious organizations seek for the sake of the profit to be made, to pillage, betray, and victimize the simple and ignorant millions of the public, and drive the artist, in all fields, out of existence by forcing him to become the servant of commercial exploitations.

"A Trader" clearly agrees with me in this denunciation, and I think, since he has denounced me, that he will sympathize with my purpose in denouncing; for he holds up as exemplary in commerce the man of absolute integrity, refinement, and kindliness. Yet any man who, even in small degree, had those virtues in his heart, would look upon the simple ignorant millions of his countrymen with compassion; would seek to guide them, and not betray them; would understand that the artist's part, in Art's many fields, is to express the finer essence of knowledge, stimulate lofty emotion, quicken sensibility, elevate thought; and would have nothing to do with conspiracies which prevented the artists from exercising those qualities. "A Trader" is therefore on my side in this, and it perplexes me that he should misinterpret me.

To attack the Commercial Ideal in its application to other affairs than commercial, no more involves deprecation of trade or of business men, than to animadvert on the principles of the "Rugger" scrum, when applied in the theatre queue, involves condemnation of the game of Rugby football or of footballers; and just as "A Trader" would be entitled to express the opinion that footballers who attempt to win by maiming their opponents and cheating the rules of play, are doing injury to a fine game and fostering brutality and sly dishonesty outside, as well as within, the world of football: so would he be entitled to hold that those who in the intercourses of trade pursue the Commercial Ideal to the extinction of the principles of honour and self-respect, which are generally observed in other fields of activity by civilized humanity, are discrediting an honourable vocation and doing serious harm to the popular standards of the community at large.

"A Trader" makes clear that he would disown such persons as emphatically as I deplore them; indeed, we appear, as I have said, to be in perfect agreement both as to facts and as to principles. I entirely agree with him that industry and trade are important, dignified, and honourable pursuits. He points out that a large proportion of the community must of necessity engage in trade; that, of course, is obviously true. I hold with him that there is no reason why anyone engaged in commercial pursuits should not be refined in mind and soul and possess a lively sense of appreciation for the beautiful and true; and I agree that there can be natural dignity in business equal in every respect to the dignity of the professions, and that, until human nature changes, there will be *men in all spheres of life* whose only aim is materialistic. I have already stated, or implied, these sentiments, and I willingly identify myself with the words in which "A Trader" has expressed them. I also know—in fact, if I would quarrel with "A Trader," it would be on the ground that he supposed I thought otherwise—that among business men we find qualities of absolute integrity, kindliness, and refinement.

What have I said that such a horrible accusation should be made against me as that I have implied anything to the contrary? But now, as I am assailed in this way, will you permit me to say—although it is unpleasant to me to be forced to state what is common to every architect as if it were a thing extraordinary—that I have business relations with a number of firms extending year after year, and that those relations are a pleasure and satisfaction to me; and that my association with builders and their workpeople has been one of the happiest and most stimulating experiences of my life, as I frequently so express in conversation with friends. The mutual respect and confidence and esteem that exists between architects and builders is so much more the rule than the exception as, alone, to knock the bottom out of "A Trader's" hastily conceived idea of the "false pedestal" he attributes to all architects because he wishes to discredit one of them. Need I add that I have many friends, and many valued acquaintances, among business men. Some of my oldest friends are exclusively engaged in commercial pursuits.

There are certain points upon which I do not agree with "A Trader." The experience must be limited which leads him to consider that, taken as a class, commercial men are every bit as cultured as the architect. That kind of experience might similarly lead him to believe that business men, as a whole, know more of architecture than architects do. Experience must be tested by reason, and it is an impossibility that in a group of young men of equal social standing and education, the individuals who, by inclination or circumstance, gave their lives to trade would become more "cultured" than the individuals who adopted the profession of architecture.

"A Trader" is also quite away from the facts if, as it seems, he supposes that professional standards are the same as busi-

ness standards. They are entirely different, as he can see for himself if he reads the rules and obligations of representative or governing professional bodies; they are, indeed, more than merely different: the rules might be considered to be so many deliberate, emphatic, disclaimers, by the professions, of all complicity with any of the shifts or practices which are associated with commercial enterprise. I do not think these considerations have anything to do with the subject we are discussing, they have certainly not been raised by me, and they have no point or meaning, as far as I can see; and why "A Trader" should specially claim for business men the one quality which they characteristically lack, instead of claiming for them some of those qualities in which they certainly excel—energy, resource, quickness, foresight, judgment—I am at a loss to understand.

I hope "A Trader" will now realize that he has quite misunderstood my attitude to commerce, and very seriously misinterpreted my views.

I can be answered in three ways. By proving my facts to be wrong. By showing that my illustrations are not attributable to the Commercial Ideal, and that my conclusions are therefore false. By maintaining that the Commercial Ideal is a good influence in civilization, and that its results are salutary. So far, no one has raised one objection to any single fact, illustration, or conclusion of mine; and no one has attempted by a word to justify the Commercial Ideal in life, or to question the position I claim for the human ideal. I am not surprised at this hesitation to assail what I know to have been a highly provocative address.

My own hesitation in dealing with the subject has been due to a sense that I was merely elaborating the obvious—and this, it seems, is more or less the case, for I have evidence which justifies me in believing that—irrespective of vocations or social classifications, and to say nothing of artists of all grades (musicians, painters, engravers, designers, actors, dramatists, authors), and of the reputable traders, small retailers, manufacturers of sterling commodities, and others who are sufferers under the nefarious activities of the Commercial Ideal—my views are fully shared by the large majority of those who are observers of, and not mere participators in, life.

H. B. CRESWELL.

Unification & Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. A. W. S. Cross and his colleagues are indignant, but they do not meet the very well-grounded criticism contained in Mr. Grayson's letter, and in Mr. Buckland's. Instead, they whip up the weary old "all architects" horse and trot him out for inspection again when every one has grown tired of him. What they have to apply themselves to is an explanation of why they stole a march on our provincial members by seeking a snap vote at a London meeting, and why, having embraced the Anti-Registrationist faith, they still profess adhesion to their belief in their old Registrationist doctrine. Whenever they come before us "The voice is Jacob's voice, but the hands are the hands of Esau."

They tell us in their latest letter that they submitted the scheme of the Unification Committee to their Parliamentary Agents and explained it at length. This does not appear in the document that they sent out to the members of the R.I.B.A. In that document they print, *in extenso*, their letter of instruction to those agents, and it comes very far short of explaining the scheme at length; in fact, it misrepresents the scheme very completely, by failing to show the care that is taken in it to exclude all whose qualifications are not of a suitable order. Mr. Cross considers that this exclusion precludes Unification; he might equally argue that the exclusion of builders precluded it. The actual scheme of the committee, quite clearly set out in general principle, is proper material for discussion, and in ordinary fairness it should not be misrepresented.

For my part I am out to help the members of the Institute, and of the profession generally, to secure what they want. Everything points to the fact that they do want Unification, because they think it is in the best interests of us all. They have to come to a well-considered judgment on the matter, and in order to arrive at such a judgment they must read what the Unification Committee says, and not what the Defence League tells them it says.

ARTHUR KEEN,
Hon. Sec. Unification and Registration Committee.

Mr. Sydney Perks has received the following letter from Mr. Herbert T. Buckland:—

Dear Mr. Perks,—The letter appearing in the professional press signed by the representatives of your Committee is merely another instance of the futility of a newspaper correspondence, as it evades a direct reply to the main point in my letter published on March 31—"that your Committee should make clear their attitude towards the question of registration by statute."

Ever since the unfortunate differences upon the Institute's proposals with regard to Unification began to develop, I have been feeling that many of these differences would disappear if a friendly talk could be arranged between representatives of your Committee and a few of the advocates of the Unification Committee's proposals, to answer each other's questions, and endeavour to remove the misunderstandings which obviously exist on both sides.

I am making this suggestion entirely off my own bat, but I am sending a copy of the letter to the professional press, and to the President of the Institute. If you and your Committee would agree to such a meeting, I would ask the President to nominate, say, four representatives of the Unification Committee to meet an equal number of your Committee.

My idea is solely to endeavour to arrive at some definite understanding as to each other's point of view, and if at the conclusion of the meeting it was felt that any useful conclusions had been arrived at, that a statement should be drawn up and published, so that the profession might see how the matter stands between us, and be assisted in arriving at a judgment upon the points at issue.

Opening of the Buildi Exhibition

The opening of the exhibition attra a goodly number of visitors famou the world of construction, including Henry Maybury, Sir Henry Tanner Aston Webb, Sir George Frampton Frank Baines, Sir Lawrence Weaver, many others whose names are eq familiar.

Mr. Greville Montgomery, in the c said that the present exhibition was last of the three annual ones held the war, and that henceforward would revert to the old biennial arra ment. Comparisons had, he contin been made between the Building Ex tion and that which preceded it; he even been accused of overlapping, as a matter of fact there was no simil between the two. Theirs was no advertising stunt, but had a serious t interest; they were content to take credit and let the cash go. All exh had an interest for the building t and the support of the architectural fession was of the first importance.

Mr. Montgomery then called upon Paul Waterhouse, P.R.I.B.A., to the exhibition, which he did in a del fully humorous speech. It was, he a great pleasure and honour to de the exhibition open. It might be lik to Jack in the box, of which the exhib furnished the very excellent stu while Mr. Montgomery provided spring. Nothing remained for him b raise the lid.

The exhibition habit was growing Building Exhibitions were instructiv architects. In the old days there always been the difficulty of kno what to buy, but the exhibition w shop-window in which the goods r actually be inspected. The present a time of hope, and building was co back to its own. The law of supply demand would restore equilibrium, interest would be revived.

Mr. Forsdyke, speaking for Mr. who was unable to be present, pro the vote of thanks, and congratu Mr. Montgomery on the excellence o exhibition. The building trade ha been busy because its members had otherwise employed, and now ho had come to an end through the fa one who should be nameless, houses be produced at less cost, and all would have to combine to that Labour, material, and profit mus come down.

Mr. H. J. C. Johnston, President Institute of Clayworkers, seconde vote of thanks, and referred to the im given to the use of clay material products by the late Alfred Waterh especially with regard to the u colour.

Publicity was necessary at the pr day, and the best propaganda lay i quality of the goods. The quality o products had been criticized, and some justification, but the make inferior bricks were not genuine c men.

An informal lunch concluded the ceedings.

[The various meetings and arrangements in connection with Exhibition are given fully on page 5

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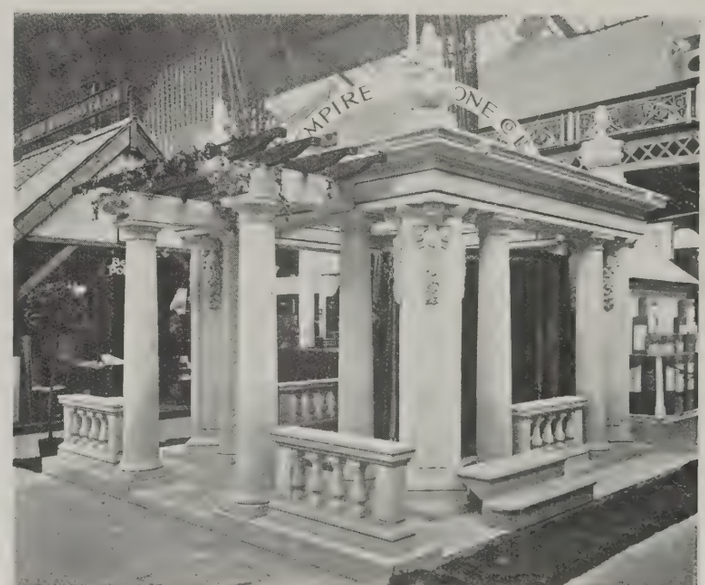

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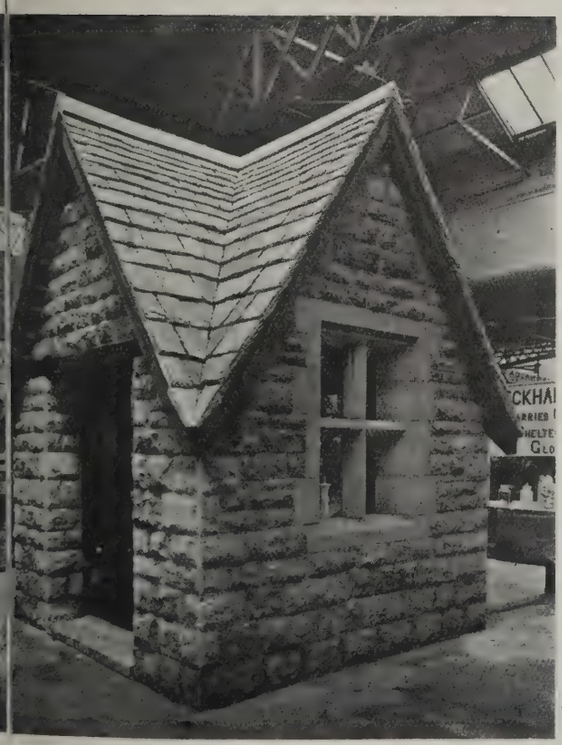

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Notes on Some of the Stands

By FREDERICK CHATTERTON, F.R.I.B.A.

THERE are doubtless very good reasons—from the point of view of the promoters of the exhibition—for repeating once more the arrangement of the gangways and the positions of the stands which have been adopted for many years past, without material alteration.

Financial considerations must necessarily be among the more important of them, and while it would not become one who lacks experience in such matters to dismiss them lightly, it may at least be questioned whether order and business success are nevertheless incompatible.

It is probable, however, that exhibitors themselves contribute in some measure to the perpetuation of the present sytem, by stipulating—as we believe many do—for the same floor position as they previously occupied, just as the city man likes a particular corner in the railway carriage, and his customary seat in the restaurant.

This allusion to the foregoing aspects of the case certainly helps us to realize the complexity of the problem which has to be faced by the exhibition authorities. But in acknowledging them thus frankly, we feel that the suggestions for worthier stand designs and a fresh "lay-out" of Olympia's vast floor area, such as were called forth as a result of the JOURNAL'S recent competitions, might well be given serious attention by the organizers. It should be here explained that the chief purpose of the present survey is not to call particular attention to specific exhibits, but rather to comment—a little critically, perhaps—upon the architectural qualities of the stands in which they are displayed, or of which they may appropriately form a part.

Æsthetically considered, the stands at this year's exhibition are, on the whole, an improvement on those of last year, but they nevertheless still fall short of the standard one remembers so gratefully in pre-war days, when in quite a number of instances exhibiting firms commissioned architects of the highest repute to design them.

In several cases one recognizes stands which were erected at last year's exhibition; and though some of these possess merit as designs, they have already been described, and need not therefore be referred to again.

It will be very generally agreed that one of the most ambitious and substantially built stands in the exhibition is that of Messrs. W. G. Tarrant, Ltd., which has been designed by Mr. J. Sydney Brocklesby, A.R.I.B.A. The structure is a double-storied one—somewhat suggestive of a shooting box or a forest lodge—and is of half-timber construction, with brick-nogged panels illustrating various types of the company's high-grade bricks, sometimes built in level courses, and in other cases diapered, or of herring-bone pattern. There is a well-designed external oak staircase—newelled and balustraded—which leads to the upper floor, and the roof is covered with Rowland's Castle tiles. The general effect is unquestionably picturesque—as will be seen from the illustration which appears in this issue—but the detail is by no means faultless. If, for example, the barge-boards had been increased in width, and their feet less violently sprocketed and of simpler shape, the gables would have been far more successful than they now are.

Another stand in which oak figures to great advantage is that of Messrs. San Elliott and Son, of Reading. material is used on the principal front the end return, in the form of a T arcading constructed of solid En oak, treated by a special process w imparts in five hours the effect of centuries! Internally there are panelled rooms—one Elizabethan and other Georgian—and a third comp ment contains the firm's patent revol door and other separate exhibits. Elizabethan apartment is panelled finely figured oak, and includes a re of a very beautiful door from Siz Castle, as well as a mantelpiece in mony with it. It is worthy of note the whole of the oak used on this s was grown on the estate of the Duk Wellington, at Strathfield-Saye, Reading.

Messrs. Harland and Son are t congratulated on the very impo pavilion they have erected, designe Mr. Edward Keynes Purchase, F.R.I.B who has succeeded in producing academic composition based on Ro Ionic tradition. The columned po is pedimented, and the external wal the structure itself are pilastered arcaded.

Mr. J. Crowe, O.B.E., A.R.I.B.A., designer of the stand put up by Buil Products, Ltd., has shown commend reticence in its external treatment. motif is exceedingly simple, the lett excellent, and the colours harmoniou

The exhibit of Messrs. W. T. Lamb Son represents an old-world garden and shows all the mellowness and of old English brickwork. The tiled coping which protects it has hanging eaves, and rises in the c

WILLIAM HARLAND AND SON.
DESIGNED BY E. KEYNES PURCHASE, F.R.I.B.A.

BUILDING PRODUCTS, LTD.
DESIGNED BY J. CROWE, O.B.E., A.R.I.B.A.

IODEL OF A GARDEN HOUSE EXHIBITED BY THE SOMERSET TRADING CO
DESIGNED BY SAMSON AND COLTHURST, LIC. AND A.R.I.B.A.

ntally. Tile bands are employed e quoins, and the wide joints are d flush. One may say that the ar charm of this exhibit is largely the inherent beauty of the bricks relves.

srs. Percy C. Webb, Ltd., have an stand, at one end of which has been d a distinctive-looking cottage with walls of Bryscom, a new build-tone from the Draycot quarries, rsetshire. The door in the centre ne-axed jambs and lintel, and the is covered with picturesque tile from the same neighbourhood. ure column—also of Bryscom—which rts one angle of the roof, is partly ed to show the possibilities of the ial as a decorative marble.

excellent bricks made by Messrs. l E. Collier, Ltd., might have been nder more favourable conditions if mpany had employed an architect ign their stand. As it is, an other-easing piece of craftsmanship is d by an ungrammatical combina-f moulded bricks in the cornice, and errors which are the hall-mark of nateur designer.

arden temple—designed by Messrs. ooke and Bedingfield for the Empire Co., Ltd.—is a very good example at a stand should be. It is con-ed of artificial stone made by the ting firm, and possesses much ter. Especially effective are the pergola porch and the carved pen- of conventionally treated fruit.

stand of the Leckhampton Quarry td.—the work of Mr. L. W. Barnard, B.A.—is charmingly reminiscent Tudor manor houses of the Cots- district, and consists of a small structure built of Leckhampton It is gabled on each face, and with Eyford first-split stone tiles. alls are of rock-faced twice-bedded , and the transomed windows have dressings. For its size, this stand of the most satisfactory in the tion.

Fixtures at Olympia

Wednesday, April 19.

Olympia : Architects' Welcome Club.—"Old St. Paul's and other Cathedrals." By Mr. Herbert A. Cox. 6.30 p.m.

The Concrete Institute.—Discussion on (*a*) "Concrete Roads," and (*b*) "Use of Reinforced Concrete in Highway Bridges." To be opened by Dr. Oscar Faber, O.B.E. 5.30 p.m.

Thursday, April 20.

Olympia : Architects' Welcome Club.—"The Englishman's House : A Talk to People who know nothing of Architecture." By Mr. Nathaniel Lloyd, O.B.E. 6 p.m.

The Concrete Institute.—Discussion on "What Life can be Assigned to Works of Reinforced Concrete for the Purpose of Government Loans." To be opened by Mr. G. C. Workman, M.S.E. 5.30 p.m.

Friday, April 21.

Olympia.—Reception in the Pillar Hall by the Presidents and Councils of the R.I.B.A., the Society of Architects, and the Architectural Association, 3 p.m. Banquet, 6.30 p.m., Mr. Paul Waterhouse, P.R.I.B.A., in the chair. "Architects' Olympian Night" in the Conference Hall, 9 p.m.; dancing from 9.30 to 5 a.m.

The Concrete Institute.—Discussions on (*a*) "Concrete Block Building; (*b*) "Reinforced Floors"; and (*c*) "Use of Pre-Cast Work in Building Structures." To be opened by Mr. E. S. Andrews, B.Sc. 5.30 p.m.

Monday, April 24.

Olympia : Architects' Welcome Club.—"What we mean by Town Planning." By Professor Patrick Abercrombie, F.R.I.B.A. 6 p.m.

Wednesday, April 26.

Architects' Welcome Club, Olympia.—"Modern Domestic Architecture : Fashion and Style." By Sir Lawrence Weaver. K.B.E.

A Woman Views the Exhibition

To a woman who has, like myself, suffered many things at the hands of plumbers, the most intriguing thing in the exhibition is undoubtedly the washerless non-leak tap. This is a new invention, and should, if it fulfils its promise, prove a boon in many a household. Not less attractive is the new metal of which it is made. Wytallite resembles nickel silver, but, unlike that metal, is guaranteed not to become stained or tarnished. Bathrooms and sculleries thus equipped should need little attention from either the British workman or the British domestic.

Making a swift ascent from the kitchen to the drawing-room, no one should miss the very charming little interior decorated by Messrs. Gaze and Sons. Soft grey panels are outlined by a Chinese lacquer red, and this note is repeated in the attractive marbled effect of the painted wooden mantelpiece. An unusually realistic electric fire flickers in the grate, but the heat comes from a radiator cunningly concealed beneath the hearth. Golden reed-like screens shade the windows, and silk shades of unexpected shapes and attractive colouring complete the Oriental effect.

That steel tents can be made into very engaging habitations is effectually demonstrated by George Blay, who has erected two on his stand, and furnished them completely, one as a bedroom, the other as a sitting-room. One can imagine nothing more delightful than a garden-house of this type, and the furniture provided is particularly suitable for hard wear. It is a new Canadian product, looks like very light bamboo work, and is made of wire and paper!

Talking of garden-houses, every woman will covet the half-timbered gazeba shown by Messrs. Tarrant. This is built of English oak, and has an adorably rustic appearance, while its excellent brick fireplace and comfortable furniture make it an ideal retreat for cold summer days.

The National Building Guild, too, specialize in good furniture and joinery, some of which has been designed for his own house by a well-known architect. Australian black bean is an unfamiliar wood which has been employed with amazing success, and a built-in sideboard and refectory table are worthy of attention.

Heating and cooking apparatus for houses large and small is well represented, and bathrooms seem to assume ever new complexions. Every imaginable colour is brought to bear on their decoration, and marbles, tiles, and paints vie with each other in glory.

A new wall finish has made its appearance in Wovenboard panelling, a plywood in oak, mahogany, walnut, and other hardwoods. It can be either polished or left plain, and eliminates both lath and plaster and wallpaper. Delightful decorative effects can be obtained at a very moderate cost, and for those who covet the richness of wood panelling but grudge the expense, no better substitute could be devised.

E. N. B.

Some Special Features of the Exhibition

1.—Concrete Construction, Machinery and Plant

It has been duly recorded, in these pages and elsewhere, that the annual dinner of the Concrete Institute was attended by 250 members and guests, a number far exceeding all previous records. The president, Mr. E. Fiander Etchells, likewise exceeded, on that occasion, all previous records, if not also the speed limit; for in toasting "a health unto his Majesty" and other august personages, lightly referred to the Prince of Wales as "the bright reinforcement of our concrete Empire." Truly felicitous, and felicitously true. All the same, Mr. Etchells had better be circumspect. For much less reckless utterances men have been known to suffer the penalty of knighthood. But the fortunes of a jest are in the ear of the hearer; and the point to observe is that a few years ago Mr. Etchell's little joke would have fallen very flat outside the membership of the Concrete Institute. It would probably have been suppressed by the reporter, who, not himself knowing what reinforcement meant, was certain that the general reader, being in the same predicament, would not appreciate the humour of it, and might even suspect it of covert disloyalty, if not of rank blasphemy: for "only the unknown is terrible."

Nowadays, however, there is no one to whom reinforced concrete is a meaningless expression. Everybody knows what concrete is, and what are the means and the functions of its reinforcement. Of course, the layman cannot be expected to be fully acquainted with the technical details; a thorough knowledge of them is for the expert. But everywhere reinforced concrete as a building material has become so familiar that nobody is nowadays so ignorant as to view it with suspicion, nor even with disdain, still less to be afraid of it.

Reinforced concrete is, in fact, universally regarded as at once the most ductile, the most versatile, and the most durable of materials, and it may therefore be claimed without exaggeration that everybody is more or less interested in it—everybody, that is, who is interested in building at all—and that every visitor to the exhibition will examine with alert intelligence, and at least a fair degree of comprehension, everything relating to it there displayed.

There is here at Olympia plenty to reward the keenest curiosity and attention. Here it is possible to learn every essential detail about reinforced concrete; for what is not actually here to be seen can, for the most part be easily inferred. In some instances, however, the exhibitor goes beyond showing the materials—cement, sand, aggregate, waterproofer, mild steel variously and ingeniously shaped to fortify the mass of plastic material into which they are to be inserted to "take up" the strains and stresses that of itself it could not withstand: you are shown all the operations of mixing, gauging, grading, colouring (yes, it has come to that!), reinforcing, and building. There is but one respect in which reinforced concrete has to be taken on trust: one cannot see it get harder and harder for half a century or so "while you wait." That it will most certainly grow tougher as the years pass by is not a mere matter of faith or theory. There is the evidence of Roman walls to prove that after a thousand years the cement-concrete is stronger than stone. There is no room for scepticism about it. Parts of the old Roman wall around London had to be blasted because they broke the picks with which vain attempts were made to demolish them. If it could speak, any reinforced concrete structure might borrow the watchword of M. Coué: "I am getting harder, harder, harder every day."

What the "anxious inquirier" cannot understand from what he sees he will be able to gather from what he hears at the series of discussion arranged by the Concrete Institute to take place in the small Conference Hall on April 18, 19, 20, and 21. That to be held on April 20 bears directly on the question of durability, for on that evening Mr. G. C. Workman will posit the important question: "What life can be assigned to works of reinforced concrete for the purpose of Government loans?"

As we have already said, bits of old London Wall, and of many another ancient example of concrete work, could be adduced in evidence that this kind of materials lasts, as the great engineer said of his favourite stone, "for all eternity and a hundred years after." This ought to satisfy the conditions of the longest-term Government-cum-Municipal loan.

It is a fortunate thing that the "still life" aspects of the subject can be reinforced in so many interesting ways by machinery in motion. Anywhere, anything that moves and makes a noise collects a crowd, and at the Building Exhibition you shall always find a group of fascinated spectators watching the concrete-block-making machines rapidly shaping and finishing the "bricks and tiles that need no baking," as we heard one observer remark admiringly. Then there are mixing, gauging, and crushing operations which all fulfil more or less admirably the prime conditions of giving us the satisfaction which, it is credibly reported, all men feel at seeing others hard at work.

At the highly interesting stand where the scientific testing of cement is demonstrated with the aid of ingenious and delicate instruments, the delectable elements of noise and violent exertion are certainly lacking; but, nevertheless, the gentler spirits find ample compensation in the enjoyment of experiments seldom to be seen outside a chemical laboratory; and to the average natural man there is something mystic and magical about any kind of chemistry. If only the operators would condescend to wear conical hats and flaming robes, decorated with the signs of the Zodiac, Friar Bacon and Friar Bungay would be delightfully and half-fearfully recalled, and the organizers of "Brighter Building Stunts" would get yet another new idea for their Carnival.

In picking out the reinforced-con exhibits, one is particularly struck b ever-increasing versatility and ubi of the material. At previous exhibit one had thought, every possible us which reinforced concrete could be was displayed. It may be that its n limitless utility has been amply de strated, even though the possibilities not been completely exhausted—in they could not be, for reinforced con fairly vies with the British fighting fo which can "go anywhere and do thing," and that is a fact that the ge public have at length come to re very fully. It was proved to demon tion in its fine services rendered to t same fighting forces, to whose nee administered as no other material— even serge and khaki—could have half as effectually. It fortified against the enemy, and against dam disease, which are even more dang enemies.

Of course nearly all the uses to w reinforced concrete is being applie likely to be familiar enough to every who visits the exhibition, and what p will now look for is not further exte and unfamiliar applications, but provements in details.

Even the "man in the street" is aware—has, in effect, special facilitie observation of the fact, if there is significance in his designation—of increasingly extensive use of reinf ment in road-making. Comparat unenterprising borough surveyors are freely blaming themselves for not fo ing sooner the lead of those who recognized the advantages of a sy that is now long past the stage of experiment. By the way, the mak or some of them—of wire-mesh reinf ments are now adopting the simpl useful expedient of not allowing edges of the mesh to protrude; the now doubled over to keep them o mischief.

Posts and tubes or pipes formed reinforced concrete are, of course, means a new application of the mat but they are more in evidence at exhibition than we remember to seen them before.

As for roofs, floors, and parti these are now so indispensable t builder, and have been brought to perfection, that the main intere looking at them is to ascertain greater or less fitness of any parti brand for any particular require Where all seem to have reached p tion in all the virtues—of being against all the ill influences to w roofs and floors and partitions ca exposed in any circumstances whate against weather and wear-and-tear, g and acid, fire and vermin—there see option but to choose either by wh by chance! For an irresolute m would be a most disconcerting e rassment of resources. But truly the observation applies to the entire s denominated "Concrete Constru Machinery and Plant."

2.—Paints, Colours, and Varnishes

By ARTHUR SEYMOUR JENNINGS, F.I.B.D.

RCHITECTS, decorators, and house owners, as well as those who contemplate building, will find this at Olympia much that will interest perhaps instruct them. The industwhich produce paints, colours, var-, and other materials for beautifying reserving surfaces have made great ess during the past few years, and ne improvements continue in is directions. Some twenty years "undercoatings," which are now o largely, because of their economy practical value, were unknown. wall finishes," which are gaining as y in favour by reason of the fact hey are so easily applied, and are washable, were not made at all. ne might mention dozens of other ces to prove the real advance which een effected; for example, ready- paints made of the best possible ials; paints in semi-paste form, require only the addition of thinners d turpentine) to render them ready e; "Scumble Stains" in colours l in oil, specially prepared for ing hard and soft wood; turpentine stutes which may be used with on all ordinary work; special or preparations for applying to ized iron, steel, and other metal- the series of cheap coal derivatives or staining and preserving wood- aluminium and waterproofing ; compositions for new plaster; ble water paints and enamels—all ese were not used twenty years

or most of these new goods are to d at Olympia; and, as already sug-, they deserve careful study. A rison between the prices of different als and the length of time they will fore requiring renewal will prove n this class of materials the very quality is almost invariably the st, because of the cost of labour is saved.

ut a year ago the writer suggested ne splendid appearance of some of cimens of varnished and enamelled shown at the exhibition indicated hey were produced under much favourable conditions than those govern a decorator's ordinary Several firms this year have acted he hint and have had the finishing o their stands applied in the exhibi- all itself, a test which is clearly severe one when the dust and dirt able from such exhibitions is into consideration.

y examples of enamel and varnish are worthy of the highest praise. se of flat and glossy enamels in osition is much to be recommended. one accentuates the other; for e, where a flat enamel is used for d work and the styles and rails ssy. There are not a few clients rongly object to the high gloss of n or enamel, and would much pre- natt finish were it not for the fact is liable to "catch the dirt." Of there is a happy medium. A varnish which dries without gloss e used, although it is not recommended even for inside work, and is quite useless for work exposed to the weather. The best method is to use a rubbing varnish or glossy enamel, and when quite dry and hard to rub the surface down to an eggshell gloss by means of finely powdered pumice stone applied by means of a piece of wet felt. Care must be taken not to rub off too much. When the pumice is washed off—and this must be done very thoroughly—the work will show up very nicely. Enamel thus treated is the only practical method of obtaining a lasting flat coat for outdoor work.

A brief reference has already been made to undercoats. These are mostly made of specially selected lithopone, and have been used enormously during the last few years. There are four principal reasons for this. First, they are cheap; second, they possess extraordinarily good "body" or opacity; third, they spread over more surface than other paints—twenty-five per cent. more than white lead, for example; fourth, they are non-poisonous. They may be used quite safely under ordinary oil paint, varnish, or enamel, and being very finely ground they require very little rubbing down, which means a saving of labour. This class of paint is supplied by nearly every paint manufacturer in the exhibition. The lithopone base is produced in this country to a very considerable extent, and in America, Holland, Belgium, France, etc.

On at least two stands advantage is taken of the peculiar qualities of the highest class lithopone by providing for "two coat paint work." A liberal coat of the undercoating is sufficient to hide the knots and grain of the wood and to produce a sound solid finish. A gallon covers approximately 100 square yards on smooth wood or plaster. Upon this is given a coat of white or tinted enamel, japan, or paint, and the job is completed. This two-work idea was evolved in connection with the housing schemes, where work has to be done under strictly economical conditions, although it is difficult to understand why it would not answer equally well for ordinary buildings. If two coats of the undercoating are given there need be no doubt as to the complete covering of the work.

In a few cases there are shown some interesting colour combinations for interior decoration, and although some of them would perhaps need a little modification according to the size, aspect, and natural light of the room in which they are to be used, yet the examples shown are well worth remembering with a view to future adoption. Examining with care the various colour pattern books of enamels, oil paints, washable distempers, one is strongly impressed with the fact that although in a few notable cases the collection of colours is very large and varied, in others the colours are woefully commonplace and uninteresting. In some cases garish and bizarre colours are included in the books, but it is questionable whether these could possibly be used to produce a good effect. One is reminded of the architect whose client (a lady) greatly admired a certain design in wall-paper which most people considered hideous, but which might be charitably described as "quaint" (by the way, there are just one or two of these at Olympia). The architect remarked to the lady most tactfully: "Yes, a very charming design, but could you live with it?" The same might be said of certain colours in the paint-books.

And this leads me to make a suggestion to manufacturers of colours. I am sure that there is a need in the decorating world for some new colours which are out of the common, attractive and "comfortable," so to speak. In the drapers' trade novelties in colour are brought out every season, although it is not suggested that this should be done as far as decorators' colours are concerned. My suggestion is that the colour manufacturers should organize competitions among architects, artists, decorators, and others, and offer substantial prizes for the best suggestions of colours which are not at present obtainable. By the use of cadmium yellow, for example, a number of bright and cheerful yellows could be obtained. Then a good purple is required, a good warm grey, and many other colours which could be mentioned.

Samples submitted by the competitors might be done in oil-colours and in water-colours, but in each case at least two tints of the colour should be submitted. These could be used very successfully for self-colour decorations, in which a single colour is used sparingly on a room and tints of the same colour employed in the larger masses. In the samples the tints should be obtained in the water-colours, not by adding water, as would be done in an ordinary water-colour drawing, but by adding Chinese white, which would approximate to the appearance of distempers and flat wall finishes.

Such a competition as that mentioned would doubtless bring forward many beautiful colours of warmth and interest—colours which might be safely used in the home with a certain knowledge that they would brighten and beautify it.

Among the novelties at the exhibition may be mentioned metallic paints, which are now supplied in green, gold, copper, silver, and other colours, ready and prepared for use. One maker has introduced green metallic paint on the mouldings of a door with very good effect. There are, too, several additions to firms making flat wall paints. There are a number of paints intended for application to damp walls, and a cement paint for use on stone, concrete, etc. This is so made as to resist the action of the alkali contained in the cement, and is supplied ready mixed, all that is necessary being to stir it to the consistency of a thick cream before use. No water is added, and the paint must not be applied to existing oil-paint or other oily surface. On rough-cast work the paint mentioned is particularly successful. On the whole, the exhibition, considered from the point of view of the paint and varnish manufacturer and consumer, is successful, although one wishes that a few more of the large firms of manufacturers were showing their specialities.

3.—Electrical Equipment

By S. M. HILLS

ONE cannot by any means regard the exhibits as being representative of the electrical industry, or even adequate in proportion to the value of electric lighting, heating, and power in connection with building. So much has been said and written during the post-war period concerning labour-saving in the house that it seems a pity to find an almost total absence of the many electrical labour-saving devices that are at present on the market. Lighting, both for domestic dwellings and industrial buildings and offices is another branch in which considerable progress has been made, though there is but little evidence of this at the exhibition. One electrical appliance, and one only, can be said to be well represented, and that is electric lifts. In this connection good displays are made by Messrs. Medways Safety Lift Co., Ltd., Waygood-Otis, Ltd., and Marryatt and Scott, Ltd.

Messrs. Medway's latest design of electric passenger lift is provided with a dual control system, which on the operation of a small push button, enables control to be changed from automatic to car switch. Mistake and tamper proof locks and switches are fitted to all gates. An accelerating mechanism is fitted to the control gear, which has been specially designed to provide smooth starting and stopping. This feature is an important contribution to improved lift comfort, nothing being more annoying or objectionable to a customer than the jerks that sometimes occur on stopping, and the sudden increases in speed that occur on starting, when the control mechanism is not of the best design. In fact, efficient control gear is the most important feature in lift design, and Messrs. Medway, Ltd., having realized this, have devoted particular attention to the design of the control gear for their various lifts, and judging by the models exhibited, the results obtained are very satisfactory.

A further novel and interesting feature introduced by this firm is a patent door operating device which automatically opens the gates of the lift and landing, and can be worked from the control panel at the back or side of the cage, the attendant not having to move from his usual position to open and shut the gates.

An electric push-button service lift is another speciality of this firm. It is quite compact, has mistake-proof control gear, and forms an economical means of obtaining transport of light goods between the various floors of a building.

Messrs. Waygood-Otis are showing a full-size electric passenger lift working from the floor to the gallery. A special governing gear prevents the attainment of undue speed on descending, and also promotes smooth stopping and starting. In addition to electric lighting in the cab, a special threshold light is provided to indicate the position of the car in the well-hole, and thus to militate against accidentally injuring passengers on stepping into the car when the car is not stopped exactly at the floor level.

Sample machines are also exhibited of each type made by this firm, ranging from a service lift for light duty up to about 40 lb., with a speed of 140 ft. per minute, up to a duty of 25 cwt. at 400 ft. per minute.

Messrs. Marryatt and Scott are also exhibiting a passenger lift gear in operation, and a specimen lift cage. Particular attention has been paid to the design of the control gear, and to automatic gate-locking devices. The specimen lift cage is of interest on account of the excellent workmanship displayed in the cabinet-making, whilst the safety gear shown in the car and in operation seems to be entirely satisfactory in all respects. An ingenious device introduced by this firm is a trip indicator, which records the time and duration of every journey made by the lift. A number of photographs of lift installations carried out by this firm are shown on the stand.

Internal telephones are a realized necessity in the business office, but their use in the house has not received the amount of popularity that might have been expected, especially in these times when economy of labour is receiving so much attention. At the stand of the Telephone Manufacturing Co., Ltd., can be seen an inexpensive, but quite reliable and efficient house telephone system. The installation of such a system at the time a house is built adds greatly to the convenience of the future inhabitants, but if not built in with the house, a house telephone set can be installed quite easily at a later date without greatly disturbing decorations, etc.

Other interesting exhibits, in addition to a variety of telephone instruments in finishes to tone with any desired style of furnishing, are a loud-speaking telephone, and a Laryngaphone. The former enables the phone to be used without employing the usual earpiece or transmitter, both hands being thereby left free. If desired, conversation can be carried on whilst walking around the room or office. The Laryngaphone is specially intended for use in noisy works situations, and it has been tested and found quite satisfactory for riveting shops, machine shops, etc.

Electric heaters of the radial type, commonly termed electric fires, are to be seen on the stands of the Falkirk Iron Co., Ltd., and the Carron Co., together with electrical cooking appliances.

Rawlplugs are hardly an electrical device, but their original conception was for use in connection with electric wiring, since which their use has spread to all purposes for which a wood plug is needed to be inserted in a wall for the purpose of obtaining a screwhold to fix a fitting of any description. With the aid of this simple device a medium size screw will, when driven into a brick wall, withstand a direct pull of more than half a ton. Various uses for this accessory are shown on the stand, and a particularly representative display is made of its use in connection with electric lighting fittings, etc.

The British Vacuum Cleaner Co. have a representative display of portable stationary vacuum cleaners.

The Sturtevant Engineering Co., make a particular feature of their tur vacuum cleaning plants for use in l buildings, factories, etc. These machi in addition to carpet cleaning in ho offices, etc., are also employed for sw ing over lino, bare floors, plasterw etc. The machines are electric operated and provided with autom push-button control gear. In addi to cleaning plant this firm's appliance heating and ventilating are also played.

The exhibits of an electrical chara that there are are quite good, and sh be of interest to the architect conce with offices and buildings of the la type, but it is to be regretted that t is so little that applies to domestic w This omission must be attributed to of enterprise on the part of the elect manufacturer, for presumably space w have been available had application made at the right time.

It has been said that the right wa start building a housing colony or ga city would be by the provision o electric power or sub-station to su electrical energy for power purpose connection with making the roads building operations, and to be ultima used to supply electricity for ligh heating, and cooking in the ho Such a result will not be forthcom unless more efforts are made by elect manufacturers to bring their produc the notice of architects and buil There is no better way of doing this by supporting an exhibition of this which arouses the interest of both persons engaged in the building indu and a section of the general public.

An article on "Gas Equipment a Building Exhibition and Some Re Installations" appears on page Further articles dealing with va other special aspects of the Exhibi will be given in our next issue.

Some Further Notes Exhibits

AEROGRAPH SERVICE DEPA MENT.

THE AEROGRAPH CO., LTI

Row D, Stand 54.

This exhibit shows in a pra manner the finish that has been ap to the walls of the corridors, Rot staircases, and entrance hall of Theatre Royal, Drury Lane, Lo This work was carried out by The graph Co.'s Service Department Messrs. Hampton and Sons, Ltd. contractors for the decoration o theatre. Visitors to the exhib should make a point of inspecting pleasing and effective imitation of stone.

Address : St. Luke's, London, E.

AMS AND WILLIAMS, LTD.

Row G, Stand 138.

ting samples of metal windows in bronze, cupronized steel, and ordinary enamelled steel are on this stand. Every type of has been considered in designing l, and windows suitable for the orate municipal hall or humblest dwelling may be seen. A com-ge of fittings in various finishes own, together with an example grilles suitable for hotels or Also will be seen a sample of the climbable fencing. Information ts and suggestions for windows for any purpose are obtainable nd, and drawings and estimates furnished free of charge. The made special arrangements to all enquiries received at the , so that complete working and estimates will be available t hours after enquiries have been n. The name of "Williams" so long associated with this type s to be almost synonymous with dows, the association between xisting sixty years ago.

s: Sardinia House, Kingsway, W.C.2.

GAS STOVE CO., LTD., AND NAUTILUS FIRE CO., LTD.

Row H, Stand 144.

s stand are shown the Nautilus which are made in two types, s the ventilating ("auto-vent") le type, respectively. By the ese flues the chimney-stack is with, and greater economy, of construction, and increased and cubic capacity are secured. H." Davis gas mantel register, bited, is designed specially for njunction with either type of It consists of mantel, surround, d hearth in cast-iron, and is mplete with a No. 7 Davis gas interior fire. The last-a high-grade stove fitted with s intense flame burner, which high degree of efficiency. This or can be supplied in various ns, including that of an inde-mit, and is, in fact, also being the exhibition as part of the C." gas interior suite. This f the "N.H." interior with rein-ncrete mantel and surround, raised hearth, and is extremely ry as an inexpensive alterna-e cast-iron gas mantel register. vis gas fires exhibited are the " and "Carolean" self-con-e "Telamon" gas interior, and spur" inset fire. All the Davis ng stoves shown are equipped ious patterns of the Davis hot plate. This ensures: d gas consumption; (2) wide distribution of heat; and (3) d cooking. The Davis No. 119 d on legs to prevent the neces-oping to get to the oven. The serve the secondary purpose of the floor underneath to be y swept. Finished (back, sides, door) in white enamel to re-ized tiles, the No. 118 cooker is cleanly and attractive appear-e "Tween" cooker is now being fitted with the Davis efficiency hot plate, and in this form is shown at the exhibition for the first time. Other exhibits include the No. 93E cooker and the "Metrocom" gas range, the Davis gas iron, Davis geysers, "Auto-Economic" circulator, the Davis "Item 30" gas-heated wash copper, the "Sentry" boiler (coke-fired), the "Garba" portable gas heater, and the improved Nautilus coal-saving grate.

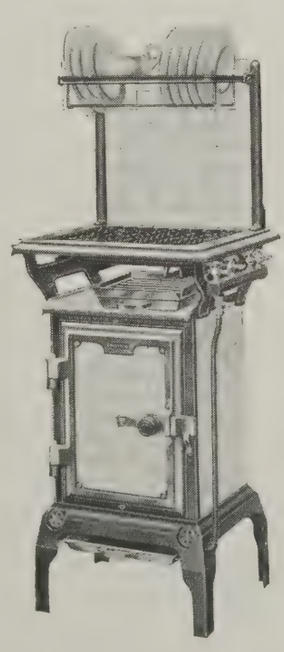
Address: 60 Oxford Street, W. 1.

DOULTON & CO., LTD.

Row G, Stands 131 and 132.

The exhibit of the House of Doulton comprises a carefully selected display of their universally known modern sanitary equipment, suitable for public and domestic use. A feature of the display is the series of bathrooms, which are fitted up complete with bath, lavatory, w.c., and all necessary accessories. The bathrooms occupy about one half of the stand, the remainder being devoted to a general selection of appliances. The new outstanding feature is the coloured Doulton ware "Keramos" lavatories, which are made at their Lambeth Works. These coloured lavatories, only recently introduced, are particularly pleasing in appearance, and as they can be made in colour to suit any scheme of decoration, they are specially suitable for bedrooms and dressing-rooms. These lavatory suites comprise shelves with jewel cups, tumbler and toothbrush holders, and tiling, all of the same ware. The "Ideal" lavatory is of the same type as the coloured "Keramos," but made in white glazed vulcanware. Other lavatories of different designs are shown in "Queensware," "Vulcanware," and a selection of different kinds of hard-wearing polished marbles. Interesting items are the "Lambeth" vulcanware sinks, the deeper ones having two soap trays, and the shallower ones, without overflows, with a single soap or brush tray. The trays are part of the sink itself, which eliminates the usual separate wood or zinc soap tray. There is also shown a large range of water closets. Overhead, as well as the compact pattern cisterns, are exhibited. Also a few types of flushing valves. The latest one is the "London," which is approved by the Metropolitan Water Board. The various pottery and metal fittings shown are so designed that they give the minimum of cleaning. One of the most efficient in this respect is the porcelain enamelled iron-covered valve, which is made in several forms for lavatories, baths, and sinks. The whole of the exposed surface is porcelain enamelled, and is kept clean by the occasional use of a damp cloth. Other exhibits include a new cantilever bracket for supporting sinks and lavatories, and Barr's bath basin, an adjustable removable bowl which rests on four wooden rollers on the rim of the bath. Many of the appliances, such as the bubbling fountains, lavatories of the island type and trough pattern, and w.c.'s, are suitable for factories and workshops.

Address: Albert Embankment, Lambeth, S.E.1.



THE DAVIS GAS COOKER, NO. 118.

VICKERS, LTD.

Row G, Stand 128.

Housing architects will find much of interest at this stand, where various descriptions of concrete machinery are exhibited, such as:—

(1) The portable concrete brick machine for making concrete building bricks of standard English dimensions, and also—by means of simple adjustments—arch bricks, and flooring bricks and tiles; (2) The portable concrete roofing tile machine, which makes a light and economical concrete tile of the interlocking type; (3) The portable concrete partition slab machine, enabling hollow or solid slabs for partitions, walls, or pavings to be manufactured horizontally with square edges or tongued and grooved joints; (4) Vickers Hobbs block machine, which makes hollow, plain, and rock-faced blocks of various sizes, with their faces downwards, thus producing an impervious face and enabling the body to be of a cheaper cement mixture; (5) A colour mill, so constructed that when filled with the correct proportions of cement and colour, and hand-turned for twenty minutes, it produces a uniform colour for applying to tiles, bricks, or slabs.

Address: Vickers House, Broadway, Westminster, S.W.1.

MOLER FIREPROOF BRICK AND PARTITION CO., LTD.

Row C, Stand 38.

This firm's stand has been erected on the company's patent "T" block cavity system of construction, which is clearly shown, together with various grades of plywood for the affixed panelling. The special feature of last year's exhibition, viz., the floating brick, demonstrating the extreme lightness of the company's insulating brick, is again on view. Other exhibits are partition blocks of all sizes, blocks for external walls, floor blocks for reinforced concrete floors, and heat-insulating bricks of all descriptions. A new feature of the exhibit illustrates the innumerable uses to which Moler can be put, such as gas-fire backs,

firebacks for coal fires, chimney construction, oven insulation, electric formers for radiators, hot plates, etc.

Address: Vickers House, Broadway, Westminster, S.W.1.

THE EXPANDED METAL CO., LTD.
Row G, Stand 141.

The exhibit consists of samples of the company's products and examples of their uses; also photographs of various works carried out on its systems. Expanded steel sheet reinforcement for concrete, which has been used extensively during the past thirty years in roads, foundations, walls, floors, roofs, bridges, culverts, silos, etc., is shown, together with rotary diamond mesh expanded steel—a new product. This material is a specially suitable reinforcement for concrete roads, foundations, and the like. It is supplied in sheets of practically any length, by 3 ft., 3 ft. 1½ in., 4 ft., and 4 ft. 1½ in. wide. The longer sheets are supplied in coils, and are thus more easily handled in connection with road work. Other exhibits include expanded metal lathings, both for interior and exterior plasterwork, in house and other construction; "Exmet" reinforcement for brickwork, concrete-block work, etc. (this material has been used extensively as a reinforcement for concrete kerbing); mild steel wall-ties for cavity walls, and a few examples of concrete reinforced with expanded metal.

Address: York Mansion, Petty France, Westminster, S.W.1.

CAKEBREAD, ROBEY & CO., LTD.
Row K, Stand 205.

Messrs. Cakebread, Robey & Co., Ltd., are exhibiting their latest exclusive desings of chimneypieces in oak, mahogany, walnut, and whitewood, into which are fitted the most modern interiors, with tiled slabbed panels in Persian, hand-painted, plain enamel, and also enamel slate chimneypieces in imitation wood colourings, with register stoves, to which are fitted self-contained flues and high-pressure boilers. These are very suitable for dining-room or living-room, especially where houses are built without kitchens, and a constant supply of hot water is thus afforded. A novel feature is a register fitted with hobs and a barless fire, and high-pressure boiler. A special lavatory basin fitted with white china taps is well worth seeing; the "last word" in hygiene, and a great labour-saver. This basin is fixed to wall by a special fireclay bracket, no iron or brasswork whatever being required.

Address: Caroba Works, Wood Green, N.23.

THOMAS POTTERTON.
Row D, Stand 63.

On this stand a practical display of gas appliances for water heating is shown, demonstrating by working examples the "Victor" gas boilers, and complete installations for domestic hot-water supply as well as central heating. A selection of standardized types of these boilers is provided, together with an assortment of complete apparatus having the boiler unit and circulating cylinder with connecting pipes, assembled in portable form ready for the pipe services. Thomas Potterton now specializes in rustless apparatus suitable for use with soft water. Treated boiler castings—with copper cylinders and pipe connections—are available for use with the apparatus, which is shown by a complete example. Thermostats for the automatic regulation of gas consumption, of both "water" and "atmospheric" types, can be seen in action. The new "Victor-Combination" boiler, for which coke or other smokeless fuel can be used as an alternative to gas, or conjointly, and the new "Victor" double boiler No. 220, are exhibited for the first time. A distinctive feature exists on this stand in connection with the lighting equipment, which has been carried out on Thomas Potterton's behalf by the South Metropolitan Gas Company with "Metro" burners and automatic switches. A new and condensed catalogue is provided for distribution at Olympia, which sets forth the capacities of the various boilers and accessories, and also contains a supplement giving practical information upon the erection of gas-heated hot-water supply apparatus.

Address: Cavendish Works, Ravenswood Road, Balham, S.W.12.

PERCY C. WEBB, LTD.
Row J, Stand 177.

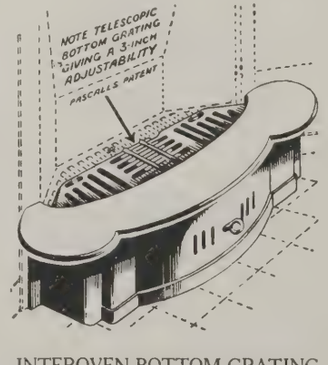
Some of the lesser known as well as the better known British and foreign marbles, including the new British black marble "Blancil," are shown in polished slabs on this stand. Bryscom is shown this year as a wall 10 ft. by 10 ft.: the plinth in rough pitched course shoddies; fine-axed string course. The wall itself is composed of random rubble with a polished Gothic panel and moulded surround in centre. Carso Blue, one of the attractions of last year's stand, is again shown.

Address: Marble Quay, St. Katharine Docks, London, E.1; and 12, 14, and 16 Englefield Road, Dalston, N.1.

THE INTEROVEN STOVE CO., LTD.
Row K, Stand 206.

The exhibits here are the "Interoven" convertible stoves, which, it is claimed, are the only efficient cooking ranges convertible into an artistic dining-room firegrate. One scuttle of coal, it is said, will do the cooking, heat the bath water, and give a cosy fire all day. It is so simple that a child can use it, for conversion takes place simply by raising the fire cover or hot plate.

Address: 156 Charing Cross Road, London, W.C.2.



INTEROVEN BOTTOM GRATING.

BRYCE, WHITE & CO., LT
Row J, Stand 190.

A large variety of joinery in patterns is displayed on this including "Castle Brand" L Swedish doors; western pine "Re Brand" doors and dressers for sti "Beaver Brand" Canadian pine builders' mouldings of the firm manufacture in deal and western and hardwood doors and wood m also manufactured by the compan

Address: 28 Wharf Road, City N.1.

SAMUEL SMITH AND SONS,
Row B, Stand 10.

At this stand is exhibited the pany's patent "Foresight" comb range, which has been expressly d to reduce fuel consumption to the possible limit. It is described makers as combining the virtues efficient kitchen range with the c warmth of an open fire, and one features is the ingenious swinging by means of which, in a few secon open grate is convertible into a cl for culinary purposes. When so a the whole of the heat is concentra the oven and boiler, which latter to be capable of supplying enou water for two baths hourly.

Address: Beehive Foundry, wick.

JOHN AND EDWIN WRIGHT,
Row L, Stand 227.

Messrs. Wright are manufactu high quality steel wire ropes, ropes, and appliances. These co complete galvanized flexible wire lashes; galvanized steel wire co window sashes; steel wire rope l steel wire rope for inclines, tramwa Manila and hemp scaffold lash ropes are also shown.

Address: Universe Rope Worl mingham.

G. R. SPEAKER & CO.
Row G, Stand 142.

The exhibit demonstrates the "Eternit" in two of its best known viz., tiles and sheets. The roof exhibit has been covered wi "Eternit" tiles, while "Eternit" have been used throughout for lini external and internal walls as ceilings. One gable has been li ternally with waterproof ro "Eternit" sheets, which have largely into use for buildings in sites, while bulk samples of cor "Eternit" sheets are on view framework of the entire building structed on the patent "Trellit ciple, which permits of units of c wall and ceiling sections being dis in an assembled condition fol The sections only need re-expan the site—which can be effected i hours—and the building can be without any specal tackle or skilled Messrs. Speaker's patent roof tru also made on a special princ uniting three welded sections, i these trusses are sent out for eas port.

Address: "Eternit House," St Road, London, S.W.6.

E. POLLARD & CO., LTD.

Row H, Stand 150.

ssrs. Pollard & Co., Ltd., exhibit their -serving fixtures for up-to-date s, including shutters (wood or steel) blinds, of which actual working ls are shown.

dress: St. John's Square, Clerken- London, E.C.

HEMEL HEMPSTEAD PATENT BRICK CO., LTD.

Row H, Stand 156.

is firm are manufacturers of "Hemp- " fixing bricks, hollow bricks, and -cotta partition blocks, claimed to reproof, sound-proof, and vermin-, and unequalled for strength and ness. They are guaranteed fire-resist- o melting point of steel, 2,786 Fahr. dvantages of using bricks and par- blocks into which you can either nails or screws, and which can be or tooled as required, will be ap- it alike to the architect and builder. are made either keyed for plastering, ooth both faces.

dress: 326 Gray's Inn Road, W.C.1.

LDERS' AND CONTRACTORS' PLANT, LTD.

Row F, Stand 124.

is firm, which is entirely composed -Service men and officers possessing le practical knowledge of engineering uilding, exhibits a number of inter- g machines and appliances. Of the more important are: (1) The a" concrete block-machine, which is ed by hand, requires no pallets, and s the block with a pressure of b. all over it; (2) The "Exe" patent with rails that can be fixed to any lding, steelwork, or brickwork; The "K.T.H." portable hoist and ing plant, consisting of a Z-shaped e mounted on a platform fitted with wheels; (4) The "Zed-Exe" hoist, a ble self-contained plant independent il scaffolding; (5) "Fircrete" clips, h are easy to dismantle and are the r locked when the weight upon is increased; and (6) The "Roll" rete mixer, with auto-elevating hop- water tanks, and oil engine—on road ls. Included in this display are con- carts, geared friction winches, "Z" es for general power purposes, hoon" power pumps, centrifugal capacity pumps, and air compressors.

ldress: 15 Victoria Street, S.W.1.

IE BEAVER BOARD CO., LTD.

Row E, Stand 97.

aver board, exhibited on this stand, imed to be a pure wood fibre wall- d, taking the place of lath, plaster, paper, etc., in use upon walls, ceilings, partitions in every type of building. made in various widths and lengths, the panels are nailed direct to the ling and ceiling joists. They can be ed with paint or distemper, and the s covered with moulding to complete panel effect. The makers state that er board will not crack or disinte- , is a non-conductor of sound, heat, cold, is unaffected by vibration, and oisture-proof. Beaver quality roof- are built up on a rag-felt base and ughly saturated with pure natural alt. They are guaranteed to provide complete protection against the worst weather, and are durable and fire-retarding. The roll roofings are made in several thicknesses, and sufficient nails and cement for laying are supplied with every roll.

"Bestwall" is a gypsum product, supplied in large panels all ready to place in position. It is fireproof and sound-resisting, and an insulator against heat and cold. Bestwall is made 4 ft. wide and in lengths of 7 ft., 8 ft., and 10 ft. long. Its thickness is $\frac{3}{8}$ in., and it will take any form of decoration, including wall-paper. It is ideal for partitions, as well as for walls and ceilings.

Address: 133–136 High Holborn, London, W.C.1.

WALTER CARSON AND SONS.

Row K, Stand 203.

This firm exhibits pure liquid paints, for highest class exterior and interior decoration, and Vitrolite, a substitute for white lead for outside and inside use. Muraline, the washable water paint; Muraprime, the priming for all distempers; Japolite, the super white japan; and Coverine, the celebrated white undercoating, are among the other specialities displayed. La Belle enamel, in thirty-two shades; metallic paints, for radiators, etc.; Velvarine, white japan; and aluminium paint, for ironwork, water, and steam pipes, etc., are shown on the stand; and washable paste distemper, Maurice's porcelaine, plastine putty for wood and iron sashes, graphite paints for iron and steel construction work, and hard gloss paints, giving a hard enamel-like finish, complete the exhibit.

Address: Battersea, London.

TURNER BROS. ASBESTOS CO., LTD.

Row H, Stand 163.

This stand has been erected as a practical illustration of the application of Turners' Trafford tiles, an improved form of asbestos-cement corrugated roofing and siding material. The firm also manufactures the "Aegis" asbestos-cement roof slates and building sheets. It is pointed out that the Trafford tile is designed to combine strength, efficiency, maximum covering capacity, and simplicity of fixing. In order to ensure close-fitting laps the Trafford tile corrugations are tapered, and two corners of the tiles are mitred, so that where four tiles meet, three thicknesses occur.

Address: Rochdale, England.

JOHNSON'S REINFORCED CONCRETE ENGINEERING CO., LTD.

Row F, Stand 114.

This company has a practical display of their specialities of reinforcements. These include lattice steel wire reinforcement, which has been extensively used in concrete floors, roofs, walls, tanks, culverts, and roads construction, and Keedon fitments, for reinforced concrete beams and columns. These have proved to be both efficient and economical, and in application have the advantage of combining rigid and yet adjustable members with a non-slipping bar. Bricktor, a reinforcement for all kinds of brickwork, partition slabs, concrete block work, etc., is shown, also an example of hollow tile flooring, which is constructed in position without the use of centering, thus enabling the work to be completed with greater rapidity than is otherwise possible. This firm have carried out very extensive works in reinforced concrete, some typical examples of which will be seen in the display of photographs exhibited.

Address: Lever Street, Manchester.

BROWN AND TAWSE, LTD.

Bay. Stand 20.

The R.C.M. department are again displaying their specialities for reinforcements, namely, B. and T. special road reinforcement. Road engineers should not miss this exhibit, known as B. and T. No. 8E. It consists of a square mesh of wires of equal strength, that when embedded in the concrete ensures the reinforcement being equally distributed. This mesh has been used with success by a number of municipal authorities. The department also show B. and T. reinforcements for concrete culverts, tanks, walls, roofs, floors, and similar constructions; B. and T. reinforcements for beams, columns, pile frames, fence posts, etc., showing the B. and T. method of ensuring correct spacing of links.

Address: 3 London Wall Buildings, London, E.C.2.

EWART AND SON, LTD.

Row K, Stand 197.

This firm exhibits a large variety of geysers and water heaters, in which the "Califont" system occupies a conspicuous place. Among other specialities shown at this stand may be mentioned the new "Boilo" gas-heated copper, the "Industria" water-heater for housing schemes, two new pattern baths—the "Grafton" combination bath, and the "Ewart" basin bath—for small houses and flats, the "Brilliant" geyser for lavatory use and for the kitchen sink, and the "Euston" and "Eclipse" towel rail which may be fixed anywhere at a trifling cost. There is also on view a glass-screen canopy bath of high quality and finish, as well as a variety of improved porcelain-enamelled cast-iron Roman baths.

Address: 346, 348, and 350 Euston Road, N.W.1.

J. A. KING & Co.

Row F, Stand 105.

This exhibit includes "King" concrete partition blocks and "King" wall blocks in various sizes and thicknesses; and "King" plaster slab partitions, ceilings, and roof slab construction (which takes the place of roof boarding and rafters, and is fire-resisting) are also shown. The "King" ferro-concrete glazing bar, it is stated, improves with age, cannot rust, requires no painting, and reduces upkeep.

"Ferro-glass" (ferro-concrete and glass construction), another product of the firm, is constructed with glass prisms having small ferro-concrete beams formed between. It is used for pavement, floor, roof, and stallboard lights, and, being weatherproof, broken glasses may be easily replaced.

"Cristol-glass" is a high-relief glass in copper glazing for domes, skylights, and vertical glazing.

Address: 181 Queen Victoria Street, London, E.C.

KLEINE PATENT FIRE-RESISTING FLOORING SYNDICATE, LTD.

Row F, Stand 111.

On this stand are shown fire-resisting floors, roofs, and staircases of reinforced hollow bricks. These are constructed with or without centering.

Address : 133–136 High Holborn, W.C.1.

LIGHT STEELWORK, LTD.

Row G, Stand 141.

An interesting exhibit is a full-size section model of the new staircase described in our April 5 issue. This appears on the stand of The Expanded Metal Co., Ltd., and illustrates the method of attaching expanded metal lathing to the underside of the stairs where a plaster soffit is required.

The new staircase construction was invented by Mr. J. Charles Moore, Managing Director of Light Steelwork, Ltd., 178 York Road, King's Cross, N., and a provisional patent, No. 3610, 7-2-22, has been granted.

The firm is now in a position to give quotations for manufacture.

Address : 178 York Road, King's Cross, N.1.

MESSRS. W. H. GAZE & SONS,

Row B, Stand 22A.

This firm are showing a model cottage they are putting up for £750, various illustrations of country ho factories, and housing schemes which have carried out. In addition a si but unusual decorative scheme is played with panels of grey veneer rounded by black and accents of Specially designed electrical fitt together with other furnishing access are also to be seen.

Address : Kingston-on-Thames.

The Fire Protection of Higher Building

By H. GUY HOLT, A.R.I.B.A.

ONE or two points in connection with the case for higher buildings appear to have been overlooked or dealt with in a somewhat summary manner. Those of us who work in the City of London are well aware of the numerous clerks and unfortunate people who spend the greater part of their lives in a dark and dingy basement—some call it courteously "lower ground floor." The increased letting space for offices, etc., obtainable in buildings higher than are now permitted by the London Building Act would, to a very large extent, do away with this. Even on the higher floors in buildings erected to-day the increased measure of light and fresh air is no little thing; and it would seem obviously easy, in connection with the permitting of higher buildings, to legislate for an angle of light and air in a similar manner to the zoning ordinances of New York recently referred to by Mr. Donn Barber in his address at the R.I.B.A. meeting.

In the City higher buildings are becoming an economical necessity. Sooner or later they are bound to be permitted, and why the R.I.B.A. Committee sit on the fence and decry higher building, and cry shame on those who propose additional legislation, is more than some of us who have constantly to meet business men on a business footing can understand. The modern architect is expected to be a business man, and to deal with problems as they arise in a business-like way.

The traffic and transport question certainly is one which will have to be seriously considered, at any rate so far as the City is concerned, and the day is coming when underground side walks and ducts for the passage of sewers, drains, telephone cables, water mains, etc., will be a necessity; the constant interruption of traffic in some of the narrow streets of the City constitutes an appalling waste of time in the aggregate.

Owing to the problem of foundations there is no question of erecting "sky-scrapers" in London, and all that is asked is greater freedom of height, which will not interfere with the light and air of the surrounding streets and property. A great many building schemes are being hung up because it is impossible to go two or three floors higher than is now permitted, and so convert a losing proposition into a paying one. Owing to the increased cost of building due to the hoisting of materials, etc., it is not a commercial proposition to go beyond a certain height, and we were told by Mr. Donn Barber that the return on the Woolworth building is practically nil, and other "sky-scrapers" did not show a return of more than two per cent. In connection with office building in the City the pulling down of old premises entails loss of rent until the new building is completed, and no English building owner would be content with anything like so small a percentage as that named for these buildings in New York.

A good deal of confusion seems to exist with regard to the question of fire, and sufficient distinction is not made between the various types of risk involved. There is, for instance, all the difference between a high building used for purely office and non-residential purposes, and the celluloid film factory, or even a large hotel sleeping a considerable number of people. It is stated that the London Fire Brigade would be unable to deal with a fire in buildings above the height at present allowed, owing to the low pressure of the mains. How is this problem met in New York? By the use of hose towers to throw in an almost horizontal jet at a great height. Also the apparatus in the buildings is arranged so that the standpipes of the building are situated in a fire-protected tower where they can be coupled up to by a fireman operating, and can be used on adjoining buildings within the radius of the jet-throw as well as inside the building in which they are installed. Moreover, all the climatic conditions of New York are against high buildings from a fire point of view. The atmosphere is much drier than in London, and in winter the cold is such that the buildings are artificially heated to an extent which is not necessitated here, and the risk of fire is consequently greatly increased. Further, there have been numerous instances of fire-brigade work being hampered by the freezing of the water from the hose.

To say that the London Fire Brigade are incapable of dealing with fire in any building up to 150 ft. high is to write them down as hopelessly incapable inefficient, if they are provided with necessary apparatus for dealing with fires. There does not seem to be reason why an adaptation of the hydr injector principle to increase pres should not be adopted. The exte openings of such buildings can be tected by a system of drenchers, a the internal risk is above normal a sy of sprinklers could be installed.

There can be no comparison bet the fire risk involved in a Lanca cotton spinning mill and an office b ing, yet mills are built on a syste basement, ground, first, second, third, fourth floors to a height of 90 ft., and cubic extent is very much larger tha permitted by the London Building These mills are sprinkler-protected, the result of a fire usually is that water damage greatly exceeds the damage.

It should be conceded, I think, legislation on this question should a further sub-division of building types now obtains under the London Buil Act, viz., buildings of the "wareh class," and buildings "not public and of the warehouse class." This "w house class" business is much too v in the case of higher buildings. F manufacturing processes and the sto of dangerous materials should certa be barred. Higher buildings for l occupancy would certainly need careful consideration, especially regard to escapes. General and dra stores could be safely allowed a gre height than at present, provided the equipped with protective devices constructed with a higher degree of resistance than at present.

The Fire Insurance Companies w charge a slightly higher premium buildings over a certain height, but matter would have to be one for an F ruling.

An example of an artistic higher building actually erected is West A House, Liverpool, designed by Me Briggs, Wolstenholme, and Thornley this building the total height from ground level to the highest point o flat roof is over 120 ft., the ground is occupied by the Bank of British Africa, Ltd., and the upper portio off in separate tenancies.

* Mr. Holt is author of "Fire Protection in Buildings," and late Surveyor, Royal Insurance Company, Ltd.

as Equipment at the Building Exhibition, and some Recent Installations

RCHITECTS and builders who have decided to install gas appliances for either cooking, heating, water heat- or refuse destruction, in connection buildings they are about to erect, find at the exhibition a very fine ion of suitable equipment shown by ading manufacturers.

Gas Cooking

e Stimex Gas Stove Company's l (No. 13) includes their A1 Range, n combines an oven, hot-plate, gas- ng stove and gas-heated circulating . It is specially designed for in- tion in small kitchens where space -important, and is constructed to by the position usually taken by the ary coal kitchener.

is company are also exhibiting their cooking stove (made in three sizes) an externally heated oven. The late of this stove has also been re- ged, with a solid plate introduced the grill for simmering and other s of slow cooking.

e Washing-up Machine Company been allotted a portion of this (No. 223), on which they are de- trating their latest machine "The nought." It is mechanically driven eated by gas, with a consumption of t 40 cu. ft. per hour. It is claimed the machine is capable of washing, g, sterilizing, and drying 2,000 es per hour, and has proved thor- y satisfactory in hospitals, res- nts, schools, etc.

shing up has always been considered of the most unpleasant household s, which, combined with the lack of nt domestic assistance, accounts, no t, for the particular attention which tors have given to this field.

the Staines Kitchen Equipment l (No. 79) may also be seen two mechanically driven washing-up ma- s, one for dealing with mixed ery, the other having a capacity for ing 1,000 plates per hour. Again gas d as a heating agent, but in this case, d of applying the heat to the ine direct as in the other cases ioned, the water is separately heated . Potterton 921 Combination gas - and storage tank.

-to-date methods of gas cooking are exhibited by The Davis Gas Stove pany (Stand No. 144).

eir "Metro-Com" is a combined ratus in which an oven and hot plate ccommodated at the same height on cial stand, and a hot closet is fitted e the oven. This has the advantage oviding for the whole cooking duty carried out at a convenient height, it is an easy matter to clean be- the apparatus.

Heating

the same stand The Davis Gas Company are showing the "Stan- period gas-fire of the dog-grate type. tove has their new satin brass finish, gives it a very pleasing appearance as the advantage of needing prac- y no cleaning.

eir "Carolean" is representative of a very high grade of gas-fire, finished in polished steel.

The Nautilus Fire Company, Ltd., show on this stand their "Built-in" gas-fire, which will strongly appeal to architects, as it is specially constructed for use in conjunction with the "economy" gas-fire flue of which we have heard so much of late.

The "Built-in" fire is supplied separately or complete with either a cast-iron or concrete mantel register and base, and the method of constructing the chimney with flue blocks is illustrated on this stand.

The writer has recently had his attention drawn to several examples of badly constructed economy gas-fire flues. It is sufficient to say that if builders carry these flues through the roof in exactly the same manner as an ordinary smoke-stack, but with the shaft, etc., of the smaller dimensions throughout which are made possible by the use of gas instead of coal fires, there is no difficulty whatever in obtaining perfect ventilation for the gas apparatus, while at the same time materially reducing building costs.

We are indebted to our friends across the Channel for "The Garba," a novel type of gas heater, also exhibited by this firm. The apparatus, which may be connected by a flexible tube, gives 100 per cent. efficiency. It is constructed with a copper parabolic reflector, in the centre of which is an asbestos mantle, within which a gas-flame burns. The whole is mounted on an adjustable stand, and the heat is reflected within a prescribed area with surprisingly good results for the very small consumption of gas entailed.

An exhibit on Thomas Potterton's Stand (No. 63) is their new air thermostat, which can be used automatically to regulate the heat throughout a building to any desired temperature.

An interesting heating installation has just been completed at 25 Old Bond Street. It is a central heating system heated by gas-fired boilers, and controlled by the above-mentioned air thermostats.

A diagram of the installation is illustrated (p. 600). The premises dealt with comprise three upper floors. Owing to the absence of basement accommodation or a second entrance for the removal of refuse, the use of solid fuel with its other attendant difficulties could not have been satisfactorily adopted.

A heating chamber, adjacent to an existing chimney, has been built on the lowest (first) floor, to accommodate the plant for the first and second floors, each having its own boilers. One boiler unit, however, is fitted on the third floor, to supply the radiators there.

The temperature control on each floor is operated by a special air thermostat, so placed as to maintain a temperature of 60 deg. F. throughout the premises. The sensitiveness of these thermostats is very marked.

Water Heating

The heating installation just mentioned also includes a separate gas boiler and storage cylinder for the supply of hot water to lavatory basins, etc.

A new combined coke boiler and gas-heated circulator is also a novel feature of Messrs. Potterton's stand.

The coke boiler is suitable for use with a cylinder of forty gallons capacity, and arrangements are made by which this may be cut out either to thirty or six gallons when the gas apparatus is brought into operation. A larger size may be obtained when radiator heating is required in addition to domestic hot-water supply.

A large gas-heated boiler to reduce the number of units when carrying out central heating work is also shown. It has a maximum consumption of 160 cubic ft. of gas, thus developing 80,000 British Thermal Units per hour, and providing a utilized heating efficiency of about 70,000 B.T.U.'s.

Gas Water Heating for Public Baths

The apparatus on The Davis Gas Stove Company's stand includes a type of boiler which is being installed for the Hackney Borough Council at their new public slipper baths in Homerton. This installation comprises a 600-gallon storage tank, and the water is heated by ten No. 2040 B.T.U. gas boilers, with a maximum hourly consumption of 800 cubic feet. This installation will supply hot water to twenty-four baths, and it is estimated that about 1,500 baths will be required per week.

Messrs. Ewart and Son (Stand No. 197) are showing many types of geysers and califonts, which are too well known to require description, but one ingenious suggestion should prove interesting.

A geyser is exhibited with a spray attachment, and it is suggested that it can profitably be installed where there is no accommodation for a bath. Immediately under the spray is a cement floor with a cement curb surround, and a trapped waste for the water to drain off.

A very cheap installation for a spray bath can therefore be provided.

Another economical form of water-heater is Ewart's "Industria." In this machine the boiler and hot-water storage is contained in one apparatus, which is particularly suitable for "housing" installations, more than 100 houses being thus fitted in the Margate Housing Scheme. This firm also shows a novelty in the form of a towel rail directly warmed by gas, which may be heated for about ten hours at a cost of one penny.

Refuse Destruction

A most useful gas appliance, known as the Domestic "Burnall," is exhibited on the stand of The Davis Gas Stove Company. This apparatus is constructed for the purpose of destroying by burning all kinds of wet or dry domestic and kitchen refuse.

Its capacity is about one pailful at a time, and it will rapidly and completely destroy the refuse, leaving no more than a handful or so of innocuous dust or ash, which may either be used as a fertilizer for the garden, or disposed of in the usual manner.

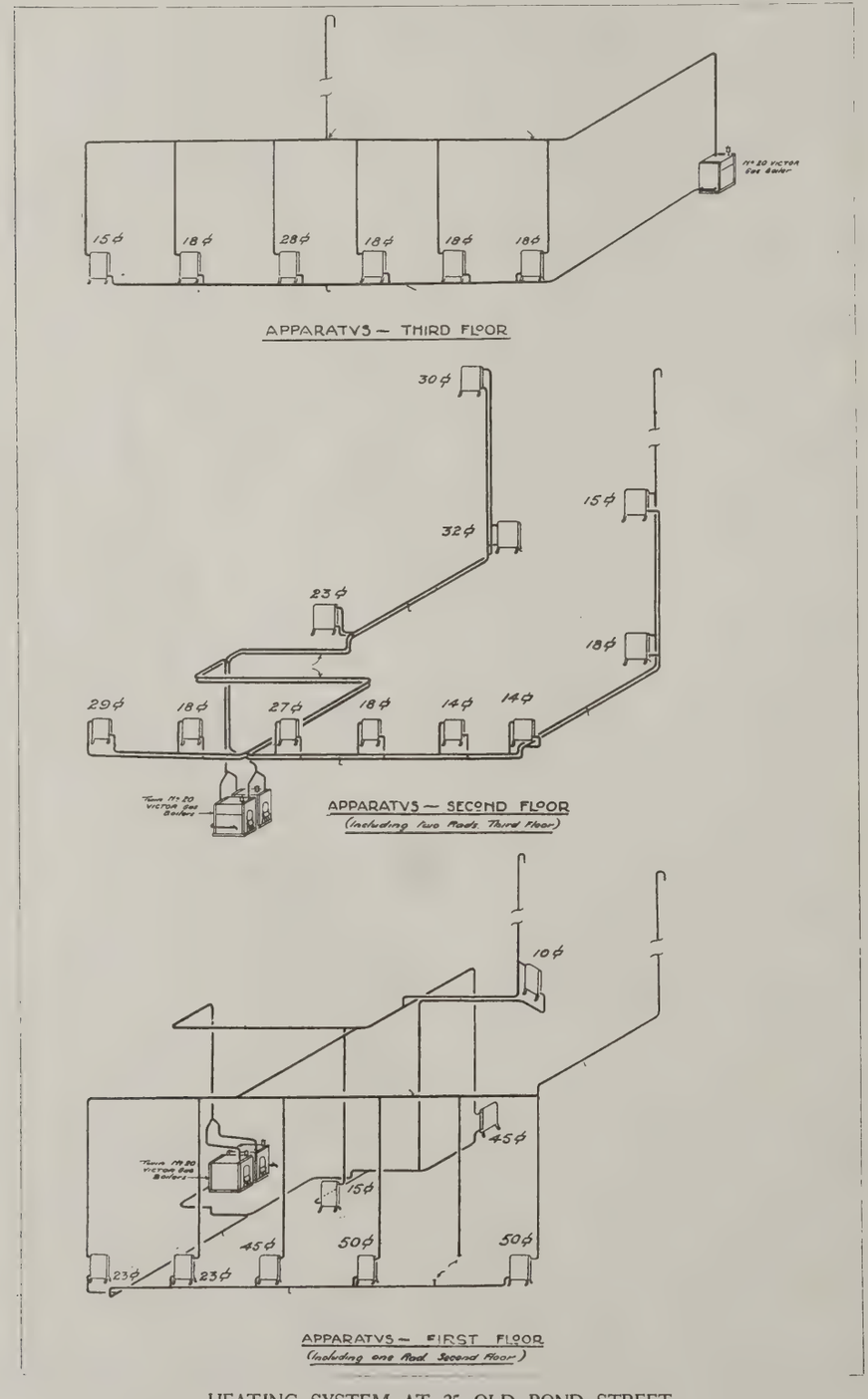
The writer knows of a case where one of these appliances has been in use in a house in Kensington with exceedingly satisfactory results. The tenant had previously paid for an extra refuse collection each week in order more satisfactorily to deal with the four bins of refuse which usually accumulated in that period, with exceedingly unpleasant results to all concerned.

The expense of the extra collection is now unnecessary, as practically all refuse is burned daily in the Domestic "Burnall."

Gas Apparatus at Becontree

The Building Exhibition is promoted to create interest in housing and to bring before professional men and the public any new appliances or forms of building construction, while keeping us all well informed as to what is going on in the building world. It may, therefore interest our readers to know what gas apparatus is being installed in the largest housing scheme in the country, namely, The London County Council Estate, Becontree, Essex, where 5,000 houses are already in course of construction.

Each house contains an automatic meter, a cooking stove, a "New Cottage" gas water heater, a "Built-in" gas-fire, and a complete gas-lighting installation, each fitting being provided with up-to-date inverted incandescent burners. C.



HEATING SYSTEM AT 25 OLD BOND STREET.
(*See preceding page.*)

Ipswich War Memorial Competition

The Ipswich War Memorial Commit invite designs in competition for a memorial. Mr. Henry V. Ashl F.R.I.B.A., is assessor, and the follow premiums will be paid: first, £1 second, £75; and third, £50.

The site of the memorial is conspi ously situated in Christ Church Pa west of the old mansion and on ris ground. Services of Commemoration take place adjacent to the memor The alteration to the lay-out is to be considerable, but some suggestion planting of trees or shrubs or formatio paths is desired to enhance the digr of and general approach to the memo —the competitors are recommended view the site. The committee sug that the memorial should be a restrai and dignified architectural compositi of such a character as fittingly to rec the names of some 1,400 who have fal These names must be treated in entirely permanent and legible man It is also suggested, in view of the amo of the fund available, that sculpt should only be adopted to a minor deg Portland stone in the main would b fitting material for the general format of the memorial. The total cost of memorial complete, with any modif tion of lay-out and planting, is no exceed £4,500, including foundati which must be shown on the drawing

All drawings to be in black line, rectly shaded in a neutral tint if desi on white paper, to be without borders unmounted—the sectional parts may coloured a neutral tint or blackened The following drawings are required, v A 1-500 block plan showing the lay- with the surrounding paths, plantati etc., and any modifications cle shown; ½ in. detail elevation of the me rial, with such ½ in. plans and sect as will completely expose the des including the construction; typical l scale details of any sculpture or modell and of the inscription. A perspec sketch may be included if desired, exceeding 12 in. by 8 in. size. whole to be shown on not more than sheets of double elephant size paper.

In addition to the drawings, a s type-written report, expressed in the person singular must be provided giv first, information regarding the de which cannot properly be shown indicated on the drawings, particul any notes as to any sculpture or allegorical or symbolic suggesti Second, description of materials thro out, particularly that for recording names. Third, an estimate of the showing in detail the method of arri at this—the estimate must provide everything necessary to entirely com the memorial in every respect, inclu any sculpture or carving or any m work, and the lay-out.

Each set of drawings must be se anonymously, without motto or devi any kind, or any handwriting, and w sealed foolscap envelope containing name and address of the author, and a declaration signed by him, stating the design is his own personal work, that the drawings have been prepar his own offices, and under his own sonal supervision. Designs to be

ed, carriage paid, to the Joint orary Secretary, Mr. G. M. B. gdon, at 12 Tavern Street, Ipswich, June 17, 1922, and marked on the ide of the package, "Design for War norial."

he Demolition of Bolingbroke House

e learn with grief that Bolingbroke se in Battersea is shortly to be given to the housebreakers in order to make n for an extension of the flour mill ch towers over it.

olingbroke was exiled for his champ ship of the Pretender. He fled to nce in 1714, but was allowed to return ngland nine years later. Prevented n re-entering politics by the watchful lpole, Lord Bolingbroke became a er in the world of letters, and after death of his father made Bolingbroke se the centre of the then modern ol of letters. The elder Pitt, Mallet, ft, Pope, and Lord Chesterfield were stant visitors to the house, no doubt ing the journey by boat, and it is r that Lord Bolingbroke was a generl host who liked his friends to stay with . Unfortunately only one wing now ains, the rest having been demolished 780, when a windmill was erected, but portion that remains is the most resting historically.

his wing, used as offices by the flour- clerks, contains some 3,000 ft. of lliam and Mary panelling, in unusually d repair, three Jacobean ceilings of strap-pattern, a very fine Jacobean elled staircase, an underground pas- said to communicate with St. John's , Clapham Junction, and the famous ar Room. This Cedar Room, panelled n diamond-shaped panels, is a marous example of the cabinet-maker's and is said to have no equal in ope, so that antiquaries from every t of the country have been accustomed ravel to Battersea to examine it. It enerally thought that this room was ially designed by Lord Bolingbroke, it contains a very pretty Louis XIV place which he, no doubt, brought back n France on his return from exile. In case, it is known to have been Pope's urite room, and he is generally reted by contemporary historians to e written his "Essay on Man" in this m, looking out on the lawns which n ran down to the river. It was also the Cedar Room that Bolingbroke rtained his friends, and indulged in wild midnight orgies. It is now more than probable that this relic of the best period of English cabinet-making may go to America, for there is little demand for rare antique house decorations in this country. There are several New York dealers due shortly in London, and it is more than probable that the entire interior will be shipped to the States.

It is a curious commentary on this state of things that the price asked is actually smaller than a modern cabinet-maker would demand for the same work, even if he had the skill to carry it out. One of those who contemplated purchasing the Cedar Room was Lord Kitchener, who had plans and sketches laid before him only a week before he died.

The Turner Water-colours

The Turner water-colours, selected many years ago by Ruskin, have now been placed on view at the National Gallery for the first time since the war. With them are placed the two large Turners and the two large Claudes, which by Turner's express direction were always to be hung together in the Gallery. Two smaller pictures by Claude and eight pictures and studies by Turner still further emphasize the difference between the two painters. Lady Lucas has renewed the loan of her famous Genoese Van Dyck, "The Balbi Children." Another addition to the collection is a little roundel by Masaccio, representing "God the Father."

WAR MEMORIAL GATES, RUGBY, FLOODLIGHTED.

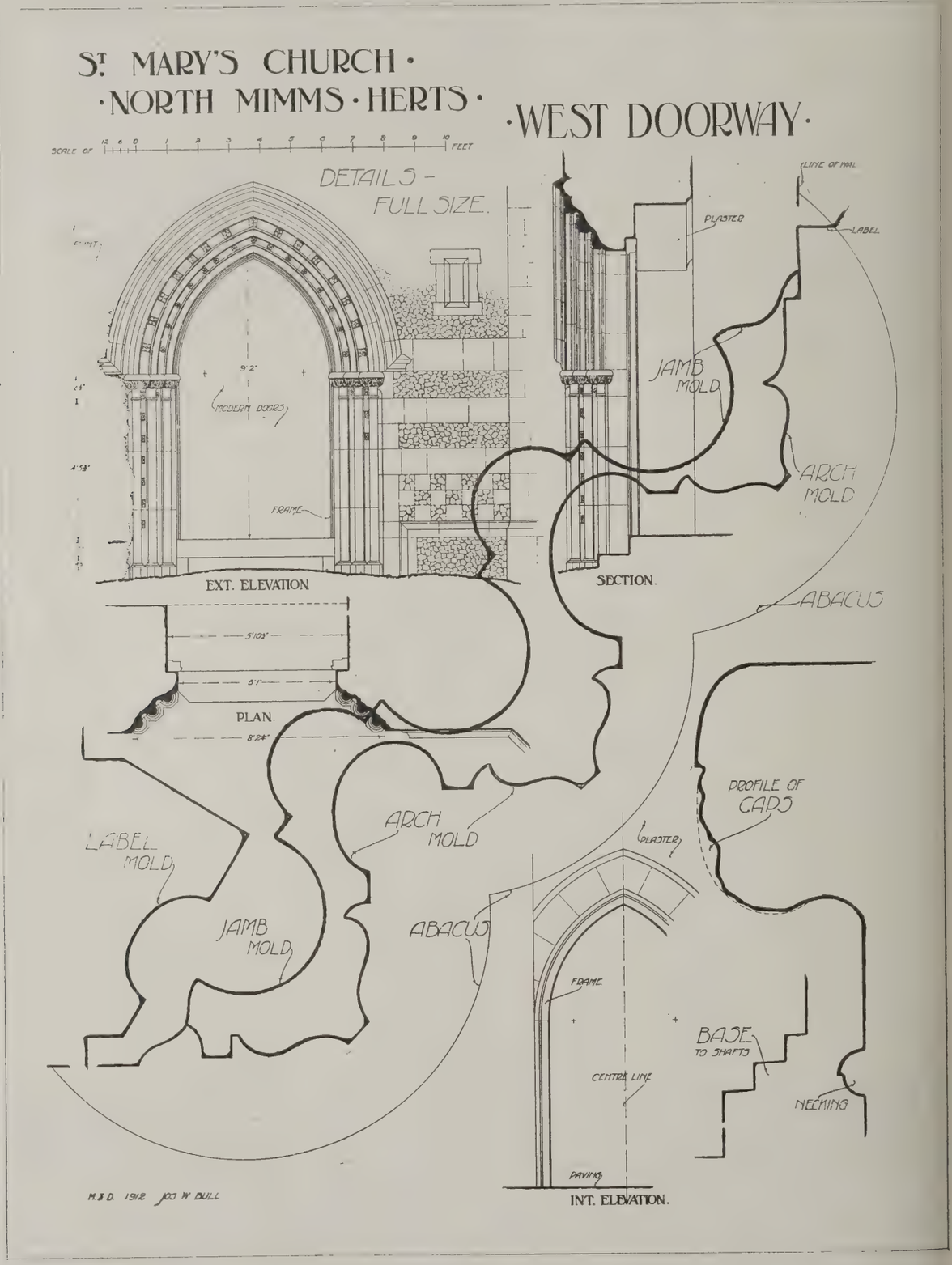
Floodlighting a War Memorial

The spectacular value of floodlighting has often been exemplified, but never more impressively than in connection with the illumination of the war memorial gates at Rugby.

For the illumination of the gates two B.T.H. floodlight projectors, equipped with "Mazda" gas-filled lamps, were employed. The projectors were situated on the other side of the road, and fixed at a height of about 7 ft., so as to bring the beams above head level. In an installation of this kind it is, of course, desirable to avoid any unevenness of light which might be caused by the reflection of the lamp filament. This was accomplished by the use of diffusing mirror reflectors, which, in addition to reflecting the light, also perform the function of breaking up the rays in such a manner as to eliminate striation.

It was also desired to keep the illumination within the limits of the monument, since any stray light would obviously have detracted from the general effect. Each projector was therefore fitted with a spill shield—a device specially designed to give a definite cut-off to the beam. This installation—the success of which may be judged from the accompanying photograph — was designed by the Illuminating Engineer's Dept. of The British Thomson-Houston Company, Ltd., Rugby, and 77 Upper Thames Street, London.

MASTERS AND SOME OF THE STUDENTS OF LIVERPOOL UNIVERSITY SCHOOL OF ARCHITECTURE. PROFESSOR REILLY IS SEATED IN THE FRONT ROW.



ST. MARY'S CHURCH, NORTH MIMMS, HERTS: WEST DOORWAY.
MEASURED AND DRAWN BY JOSEPH W. BULL.

Law Report

ntry House Decorations

Martin and Son v. Hume.

April 5–7. Official Referees' Court. Before Mr. Pollock.

was an action in which Messrs. and Son, builders, carrying on s at Oxted, claimed from the nt, Mr. Hume, £414 14s. 2d., of account of £1,530 12s. 10d. k done and materials supplied in tion with the repair, decoration, ating of defendant's house, March Westerham.

Palmer appeared for the plaintiffs, . Colam, K.C., for the defendant.

n the opening statement of plain- counsel it appeared that when nt purchased March Mount he to have the house repaired, ed, and heated for his own occupa- nd he engaged the plaintiffs to work, towards the total cost of ie had paid £1,150 18s. 5d., leaving ance for which plaintiffs now sued.

vas, said counsel, a general denial part of the defendant of liability, allegation that plaintiffs verbally that they would charge only the labour and materials plus a per- for supervising and carrying out rk. They, it was said, were to fifteen per cent. on the cost of nd materials, and a point would to whether the contract was for per cent. on labour and materials s defendant alleged, or on the ost, as the plaintiffs alleged. The nt further contended that the were excessive, he having been an extra penny an hour on labour.

nt also objected to pay the fifteen t. on materials which plaintiffs d from their own stores, an objec- nich counsel said reminded him lady who said that her pudding ier nothing because she had e in the house. The defendant claimed in respect of alleged rges and breach of agreement. nad been considerable difference on as to what system of heating e best. The system advocated by s was challenged by defendant, led in an expert to give an opinion, made the cost of so doing part of nterclaim. Some of the materials ere bought by plaintiffs at sales ne were obtained by way of ex- The prices charged were the rket prices, but to this defendant ected.

sses in support of plaintiffs' e evidence as to the carrying out ob and the fairness of the charges, denial to the assertion that there en waste of time. The labour, id, was obtained with difficulty, as used to the best interest of all ed.

defendant was called and gave evidence as to the orders which given to the plaintiffs, especially d to the heating apparatus. He t trouble arose about the fittings, t he had made complaints as to ner in which the work generally ried out. His first letter of com- bout the men not doing their work December 4. He asserted that ntiffs did not properly supervise k, the consequence of which was men stood about idle, smoking and drinking tea when they ought to have been at work. He had complained to the foreman over and over again before he wrote the letter to the plaintiffs. The foreman in reply to the complaints had said that "he could not get on with this, that, or the other job, because the material was not there." Witness charged the plaintiffs with having met his charge of delay in completing the heating by charging him with "prevarication and fairy tales." He repudiated the charge of an extra penny an hour on the labour directly he saw that it had been made, and nothing from beginning to end had been said to him about establishment charges. Directly the writ was issued he had paid £300 into court.

The Official Referee in the result gave judgment for the plaintiffs on the claim for £403 9s. 5d., with costs. He also gave judgment for plaintiffs on the counter-claim, with costs, and ordered the money in court to be paid out to the plaintiffs in part satisfaction.

Builders and the Government

The need for getting back to private enterprise in the matter of housing was urged at the annual meeting of the National Federation of House Builders at Nottingham. Mr. H. M. Grant, of Birmingham, retiring from the presidency, said that the lack of houses, which the policy of the Government had failed to meet, had given rise to what was now one of the greatest curses in the country—the high letting of rooms. It was disgraceful that the men who had been to the front should have to submit to being blackmailed into paying for rooms twice as much as the tenant was paying for the house. He had no doubt, however, that the Government were gradually returning to a private enterprise policy in house building. They were doing now what they should have done before, namely, calling the house builder into conference.

The annual report expressed the conviction that no progress could be made by private enterprise until a definite national programme was adopted. While the uncertainty existed as to what policy would be pursued their members could not begin any substantial schemes. When the Government's intentions as to future State assistance for house builders was known the builder could lay his plans, and if the nature of the assistance permitted of private schemes in competition with the public schemes he could begin to build.

Mr. J. Squires, of Nottingham, was elected president, and in his address said the country had awakened to the waste caused by a policy largely dictated by idealists and dreamers who thought it possible to create at once a new earth on garden city lines. The reputable builder in the past had provided houses which were the last word in value for money. With reference to the houses built by municipalities all over the country at enormous cost, a great many of them were good, but there were others, and a good many, too, to which the term "brick box with a slate lid" would suitably apply. The Government appeared to have tried to cold-shoulder the house builder out of business, with the result that with all the colossal waste the shortage of houses was estimated by many as greater now than it had ever been.

British Portland Cement Manufacturers, Limited

At the eleventh ordinary general meeting of the British Portland Cement Manufacturers, Ltd., held in London, Brigadier-General the Hon. F. C. Stanley, C.M.G., D.S.O. (the chairman), said that the issue of debenture stock had been increased to the extent of £509,533. The discount at which this stock was sold, plus a small sum for issue expenses, totalled £162,180. This sum had been reduced by the transfer of the accumulated debenture stock redemption fund to £53,029, and this amount would probably disappear during the next two years as further debenture stock was redeemed out of profits. The net amount expended on works and properties during the past year was £486,136, and mainly related to improvements and additions to works. It was proposed to form an Indian company, whose works would probably be completed in the autumn, and he hoped the manufacture of cement would begin about October next.

The stock in trade had been written down to market value or cost, whichever was the lower. Investments at £1,029,360 were some £375,000 less than a year ago. The reduction was largely due to the sale of Government and other securities, which had been converted into cash for the payment of taxation and other purposes.

The profit on trading, including income from investments, amounted to £479,762, as compared with £558,839 for the previous year, a reduction of £79,077. This result had been arrived at after providing for the reduction in stock values, and after making provision for the balance of excess profits duty payable, also for the estimated liability for income tax and for corporation profits tax. On the other side of the account they had provided for the interest and sinking fund of the increased issue of debenture stock, and again placed the large sum of £150,000 to the general depreciation fund. The balance available was shown at £214,212, and justified their recommending the payment of the preference dividend to December 31, and a further dividend of 5 per cent on the ordinary shares, making, with the interim dividend already paid, a total dividend on the ordinary shares of 10 per cent. A balance of £5,150 remained to be added to the carry forward, which would then amount to £186,627, nearly three times the amount carried forward before the war.

With regard to the proposed acquisition by the Associated Portland Cement Manufacturers, Ltd., of the works and assets of the Kent Portland Cement Co., Ltd., their company had offered to give a guarantee in respect of £600,000 6½ per cent first mortgage debenture stock which the associated company proposed to create and issue in connection with the purchase. In the event of the purchase being completed, it was proposed that this company should subscribe for £200,000 of this debenture stock, which would be specifically secured on the Kent works and property.

The meeting adopted the reports of the directors and auditors, together with the accounts of the company, confirmed the payment of the interim dividend on the preference shares for the half-year to June 30, 1921, and decided that the

"final dividend on the preference shares for the half-year ended December 31, 1921, and a final dividend of 5 per cent. on the ordinary shares, as recommended by the Board, making an ordinary dividend of 10 per cent. for the year, be and are hereby declared."

Mr. H. Le Marchant was re-elected as a director.

Gas-filled Lamps for Colour-matching.

Suitable lighting conditions for colour-matching are necessary in many trades and industries, especially in those dealing with textile fabrics and dyeing processes. Until recently daylight was considered the only suitable illumination for this purpose, but recent discoveries have provided a means which enables colours to be matched by artificial light with great accuracy. Important results have been secured as the outcome of exhaustive investigation by the G.E.C. research laboratories and illuminating engineering department. Broadly speaking, the method consists in filtering the light of an Osram gas-filled lamp, thus correcting its colour value by absorbing the excess of red and yellow rays. This is achieved by using a bulb of a special blue glass. The Osram daylight lamp is particularly suited for sorting and matching colours under daylight conditions in mills, factories, warehouses, stores, showrooms, and shops, and for illuminating picture galleries and museums, billiard tables, and advertising signs. An illustrated price list, No. O.S.2706, describing the lamp, can be obtained on application to the General Electric Co., Ltd., Magnet House, Kingsway, W.C.2, or to any of the company's provincial branches.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE]

An Architect at the Pensions Ministry.

In the House of Commons Mr. Ammon asked the Minister of Pensions whether he was aware that Lieut.-Colonel Sir T. Duncan Rhind, who was appointed from the temporary to the permanent staff of the Civil Service owing to his exceptional qualifications as a statistician, acquired these qualifications during his service with the Government or before; whether Lieut.-Colonel Sir Duncan Rhind is an architect; whether he had been appointed at the maximum scale of salary for the post; and whether the appointment carried with it a pension or gratuity on retirement.

Major Tryon replied that the answer to the first part of the question was that the test for appointment was the possession of certain qualifications, and not the time when or the means by which these qualifications were acquired For eighteen months before his appointment to that department, in 1919, Sir Duncan Rhind was the Chief Recorder of the Ministry of National Service—a post for which he was specially selected on account of his proved capacity for handling statistics. The answer to the remaining parts of the question were in the affirmative. Sir Duncan Rhind was now receiving as an established civil servant £142 per annum less than he received in his unestablished capacity.

New Inventions

Latest Patent Applications.

8027.—Hepburn, A. I.—Moulding-box for concrete sills, cornices, &c. March 20.

8226.—Kahn, M.—Centering or false work for concrete floors, &c. March 21.

Specifications Published.

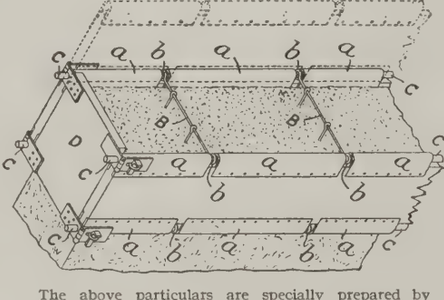
176427.—Poppleton, F. H.—Rain-water gutters for building structures.

176465.—Brown, C. L.—Mixing-machines for concrete, mortar, paint, and other materials.

176589.—Heath, W. G.—Device for supporting the shuttering employed in the construction of reinforced concrete and like floors, walls, and similar structures.

Abstract Published.

174729.—Moulding walls in situ.—T. G. Davidson, 7 Dean's Yard, Westminster.—Shutters which are adapted to be rotated through 180 degrees to a new position in building concrete walls are formed with loops *a* slotted at intervals at their tops and bottoms, and draw-rods *c* pass through these loops and through loops *b* on cross-wires B, which enter the slots in the shutter loops. After moulding, the lower rods *c* are withdrawn and the shutters are swung about the upper rod C. For stopping a wall, an end plate D having hinge or angle connections to the side shutters is used.



The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

South Wales Institute of Architects

At the annual general meeting of the South Wales Institute of Architects the following officers were elected: Messrs. Percy Thomas, O.B.E., F.R.I.B.A., President; C. F. Ward, F.R.I.B.A., Vice-President; H. Teather, F.R.I.B.A., Hon. Treas.; J. Cook Rees, O.B.E., F.S.Arc., Hon. Auditor; and C. H. Kempthorne, Lic. R.I.B.A., Hon. Librarian. Members, Central Branch: Messrs. E. C. M. Willmott, A.R.I.B.A., C. F. Jones, A.R.I.B.A., A. G. Edwards, M.S.A., T. Alwyn Lloyd, F.R.I.B.A., W. S. Purchon, M.A., A.R.I.B.A., Cecil Wilson, F.R.I.B.A., J. Williamson, A.R.I.B.A., C. J. Ward, F.S.I., Lic. R.I.B.A., and T. E. Llewellyn (Associates' Representative). Western Branch: Messrs. C. S. Thomas, F.S.Arc., H. C. Portsmouth, F.S.Arc., J. H. F.S.Arc., J. Cook Rees, F.S.Arc., dinning Moxham, F.R.I.B.A., and Crocker (Associates' Represent Eastern Branch: Messrs. C. E. Lic. R.I.B.A., C. E. Tebbs, A.R. W. Rosser, M.S.A., and W. M. T (Associates' Representative). Mr. P. Jones, A.R.I.B.A., has been app Hon. Secretary.

Obituary

Mr. John Black Hector, M.S.A

It is with deep regret that we ann the death, after a short illness, John Black Hector, vice-chairman Executive Council of the Arch and Surveyors' Assistants' Profes Union, and acting honorary s secretary of that body since May year. Mr. Hector was educated Aberdeen Grammar School, of town he was a native, and serv apprenticeship of seven years ther Messrs. W. and J. Smith and Kelly Messrs. Kelly and Nicol). In 19 entered the office of the architect London Education Committee (th Mr. T. J. Bailey, F.R.I.B.A.), an since continued under Mr. W. E. F.R.I.B.A. and Mr. G. Topham F F.R.I.B.A. Mr. Hector was only two years of age, and was very p on account of his genial personality was generous and open-hearted though holding a good position h was keenly interested in the welf assistants throughout the country; spared himself no pains seeking to ate the present unemployment i profession. For some years prev he had held the position of hon secretary to the Scottish Clans A tion.

Mr. G. E. Halliday, F.S.A., F.R.I

It is with deep regret that we ann the death, at the age of 64, of Mr. Eley Halliday, F.S.A., F.R.I.B. Cardiff. Mr. Halliday was an aut on archæology, and his works on plate and other treatises have b great demand. He was also an aut on ancient works and remains th out South Wales, particularly th Caerwent and Llantwit Major. He to Cardiff after serving his pupil London, and was for some time an ant to Mr. John Pritchard, the ar for the restoration of Llandaff Cath but at an early age commenced p as an architect and surveyor Halliday was President of the Wales Institute of Architects 1911–1913. Amongst the nur works executed by him may be men St. Teilo's Church, Cardiff; All S Church, Porthcawl; Christ Church, P Caerphilly Church Tower; St. J Church, Barry Dock; Llantwit Church restoration; Howells' Sc Llandaff; the Llewellyn Almsh Neath; alterations to the Doroth Dutch Cafés, Cardiff; Messrs. Brothers' offices, Docks; The R Llandaff, and may other churche residences, including numerous re tion works to churches, both inte and externally, throughout South The practice will be carried on f present by Mr. Chris J. Ward, L.R.I.B.A., at Cefn Mably Cha 9 Quay Street, Cardiff.

The Week's News

Orsett Rural Housing.

R.D.C. are applying to the Ministry
lth for sanction to erect fifty more

R.I.B.A. Final Examination.

wings bearing the name of the
ct in whose office a student works
t be accepted by the Board of
ctural Education as testimonies of
for the Examination of the
A.

Cheam's Old Cottage.

m's quaint cottage, which was
shipped to the United States as a
n of old English architecture, is
removed to another site. The
y of Transport refused to allow
main in its present position as an
tion to traffic, and the rural coun-
ose to place it a few yards back.

uilding Guilds in South Wales.

£400,000 worth of work has been
ted by the National Building
n South Wales in a year and nine
, and Mr. Harry Frankland,
an, declares that in less than two
ime the guild will have captured
lding industry in South Wales.

Last of Pope's Head Alley.

equently upon the rebuilding of
Bank, an old byway between
l and Lombard Street, called
Head Alley, will disappear. It
ack to the time of Henry VI. A
oroughfare for pedestrians, partly
nd partly covered, will be con-
l.

Houses at £385.

Borough of Nuneaton have accept-
nder for twenty-four houses at
£385 5s. each. Similar houses
ilt at Nuneaton about two years
a cost of nearly £800 each. The
duction is attributable to a fall
price of bricks, reduced cost of
reduced wages, and further
he cost of building materials and

o Historic Buildings for Sale.

Assembly Rooms and Claremont,
have been placed in the market.
embly Rooms were originally de-
by the younger Wood, and com-
n 1771 at a cost of £20,000. The
building includes a series of ball-
concert room, and an up-to-date
Claremont, a fine example of
k of the Brothers Adam, was
ly owned by Queen Victoria, and
was for many years the home of
ness of Albany.

Newark Sewerage.

t has been made on the Newark
scheme. The scheme has now
he Ministry of Health subject to
and a grant obtained of 65 per
the interest on £25,000 for fifteen
The scheme is estimated to cost
Messrs. W. H. Radford and
Nottingham, are the engineers.
J. Hipwood, A.M.I.C.E., borough
of Newark, has assisted them
re the scheme.

Ninth Division Arras Memorial.

At Point du Jour, Arras, General Sir William Furse has unveiled a memorial to the famous Ninth Division. The memorial takes the form of a Scottish cairn, surrounded by nineteen stone columns, each representing a unit in the division, and engraved with the regimental badge. Point du Jour formed the extreme left flank in the British advance in April 1917.

Digestor Bricks for Canada.

H.M. Senior Trade Commissioner in Canada and Newfoundland has been approached by a Montreal company who desire to get into touch with United Kingdom manufacturers of "digestor bricks." Two samples of the types of brick in use, the dimensions of which are approximately 8 by 6 by 2½ in. and 10 by 8 by 2½ in. respectively, may be seen on application at Room 41, Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.

Trade Openings in the Netherlands.

The Department of Overseas Trade have received from H.M. Consul-General at Rotterdam particulars of projected undertakings which may lead to openings for British trade. The works include an electric grinding mill at Delft; boiler-house and steam railway and annex stations at Groningen; extension of oil mills at Hoogkerk; ash transporter, motor lorries, bridge, and gas and electric works at Rotterdam; new hospital at Sittard; large tramway system for South Limberg; and extension of power station and new bridge at Zwalle.

Decay at Exeter Cathedral.

Mr. E. H. Harbottle, architect to the Dean and Chapter of Exeter for twenty-seven years, reports: "Yearly there are fragments of mouldings and architectural features falling from various parts of the cathedral to the ground and on the roofs of the cathedral, all of which is an indication that decay is continually going on and becoming serious." The Norman towers, the west front, and the parapet of the northern wall of the nave, with other portions, require immediate attention, and the stonework of many of the windows needs repair.

Ventilation of Places of Entertainment.

A report to the L.C.C. states that the Theatres and Music Halls Committee are of opinion that in certain places of public entertainment the ventilation arrangements are not up to the modern standard. As regards these premises, the Committee consider that the Council should have some power of dealing if necessary with the matter in times of epidemic, and suggest that the Ministry of Health be approached with a view to ascertaining whether it would not be possible for the Council to be granted some general power of closing such places, for short intervals, or taking such other action as may be considered expedient. The Public Health Committee recommend accordingly.

Sanitary Equipment for British Columbia.

It is the intention of the Department of Public Works of British Columbia to proceed immediately with the erection of a mental hospital at Essondale, near Vancouver. It is understood that the material to be used in the building will be largely of local origin, but that the whole of the sanitary equipment must be imported. His Majesty's Trade Commissioner reports that he is hopeful that the specifications will be so worded as to give United Kingdom manufacturers an opportunity of tendering if they so desire. Further particulars may be obtained from the Department of Overseas Trade, 35 Old Queen Street, S.W.1.

Dutch Openings for Trade.

H.M. Consul-General at Rotterdam has forwarded to the Department of Overseas Trade some extracts from the Dutch press, in which particulars are given of undertakings which may lead to openings for British trade. The projected works include a new chocolate factory at the Laakhaven, The Hague, a new laboratory at Groningen, new water gas works at Harderwijk, improvement of the fishing harbour at Scheveningen, an iron drawbridge across the Oosterhamrokkanaal at Groningen, and water pipes and an electric cable along the left bank of the Ijssel at Deventer.

Building Materials for Salonika.

In connection with the schemes for the rebuilding of the area in Salonika devastated by fire during the war, the Consul-General has been approached by a constructional engineer, who desires to be placed in communication with United Kingdom firms from whom he could obtain quotations for the undermentioned requirements: girders, roofing, cellar lights, metal window frames, wire grills, iron shutters for shop fronts, central heating. The name and address of the engineer may be obtained on application to the Department of Overseas Trade, 35 Old Queen Street, S.W.1.

New London County Hall.

The London County Council Establishment Committee have submitted a supplementary estimate of expenditure on capital account of £596,600 in respect of the completion of sections A, B, and C of the new county hall. Up to January 31 last the actual sum expended was £2,339,554, out of a total provision already made by the Council of £2,643,329. There was thus an unexpended balance at that date of £301,607. The estimated cost of completing the sections and of executing certain street works is £894,179, and the supplementary vote represents the difference between this sum and the unexpended balance. The addition will bring the total estimated cost up to £3,239,929. With regard to the northern extension of the building (Section D), not yet commenced, the committee state that they have postponed consideration of the matter for twelve months. While the estimate of £1,027,200 given in February has now been reduced to £800,000, they still consider that the time is inopportune for commencing the work.

Ratner Safes

The Ratner Safe Co., Ltd., have sent us a booklet entitled "The Eternal Struggle between the Elements of Destruction and Science," which gives a very useful outline of the points to be embodied in a reliable safe, together with a leaflet which describes how one of the company's safes foiled a very determined attempt at burglary at Adelaide.

The booklet asks: What are the essential features of a reliable safe? The answer to this depends somewhat upon the purpose for which the safe is wanted, but in the main they are as follows:—

The body should be bent solid and jointless at all twelve corners out of one steel plate. Even if only for fire-resisting purposes, it should not be less than ¼ in. —but if to resist skilled burglars then it should be at least ⅜ in. thick and have its corners strengthened by drill-proof bars inside (making such body stronger than if constructed of ½ in. thickness without that protection).

The door should be of solid steel of the best quality—not less than ½ in. thick—and if to resist burglars it should be drill-proof all over. Protection over lock only is no protection against the modern burglar.

The lock must be a safe lock—as the owner of even a fire-resisting safe should feel that his private papers are inaccessible to the pick-lock. It should not have less than seven levers, and, where valuables are concerned, in a thief-resisting safe it is a measure of extra precaution to have nine.

The special feature of the Ratner safety bolt is that, should the lock or locks on the safe be completely shattered by explosives, the bolt springs into place behind the main door bolts and prevents them from being withdrawn. In view of the increasingly frequent use of explosives by burglars such a fitment is essential.

The fire-resisting chambers should be at least 3½ in. thick, and where the space can be spared 4 in. will be found an advantage. These chambers should be packed with a moisture-generating non-conducting composition of proved capacity.

The foregoing outline is based on the firm's accumulated experience extending over very many years, and in confirmation it is stated that safes with bodies less than ¼ in. have many times failed in fires —as also have safes with the fire-resisting chambers less than 3½ in. Also safes with bodies made on the old "square corner" jointed principle and having doors of ordinary steel are constantly falling a prey to the experienced burglar.

The Ratner improved thief-resisting safes have, it is claimed, the unique record of never having been opened by burglars.

An Improved Survey Pole

Land surveyors will learn with interest of the introduction of a new and improved type of survey pole, the construction of which brings within a manageable compass a hitherto somewhat unwieldy instrument. This pole, known as the "Beverley" telescopic survey pole, is the invention of an architect, and is made of two lengths of hollow metal tubing—one sliding within the other. When closed the pole measures 5 ft. long, but it can be extended, like a fishing rod, to double that length. The spear-shaped foot, as well as the red flag section at the top, can be unscrewed from their respective ends, and carried separately. Such a pole as this, especially when several have to be transported, is easy to negotiate on the train or 'bus, owing to its short length and light weight (26 oz.). "Beverley" poles, which are painted black and white alternately in foot lengths, are sold in sets of ten, and may be obtained from Messrs. Geo. Jones and Sons, Godalming, Surrey.

Modern Building Exh tion at Turin

The first exhibition held in especially devoted to the Art of Bui was opened in Turin on April 8, an will last to May 21. The exhibition is held during the meeting of the Nat Congress of Italian Engineers and Association for the Study of Bui Materials. It has been organized group of engineers, architects, and structors, with the assistance of Government and the local authorit Turin. In addition to the exhibiti building materials and methods of struction, there is a special ar devoted to plans and models of buil and of furnished houses. The exhib is being held in the Stadium, Vinzaglio.

Coming Events

Saturday, April 22.

Edinburgh Architectural Associa —Visit to Ravelston House and crook Castle.

Monday, April 24.

Architectural Association.—Lectu Mr. Maurice E. Webb, M.A., F.R.I.

Tuesday, April 25.

Liverpool Architectural Associati Annual general meeting and Presi closing address.

Thursday, April 27.

The Concrete Institute.—"Reinf Concrete Piers and Marine Works." Mr. W. Noble Twelvetrees, M.I.M 7.30 p.m.

R.I.B.A.—Exhibition of drawin Armenian architecture from the six the thirteenth century by A. Fetva The exhibition open daily from 1 to 5 p.m. Closes on April 29.

BUILDING EXHIBITION. OLYMPIA. APRIL 11th to 27th. STAND 121. ROW F.

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day, April 26, 1922. Vol. LV. No. 1425

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

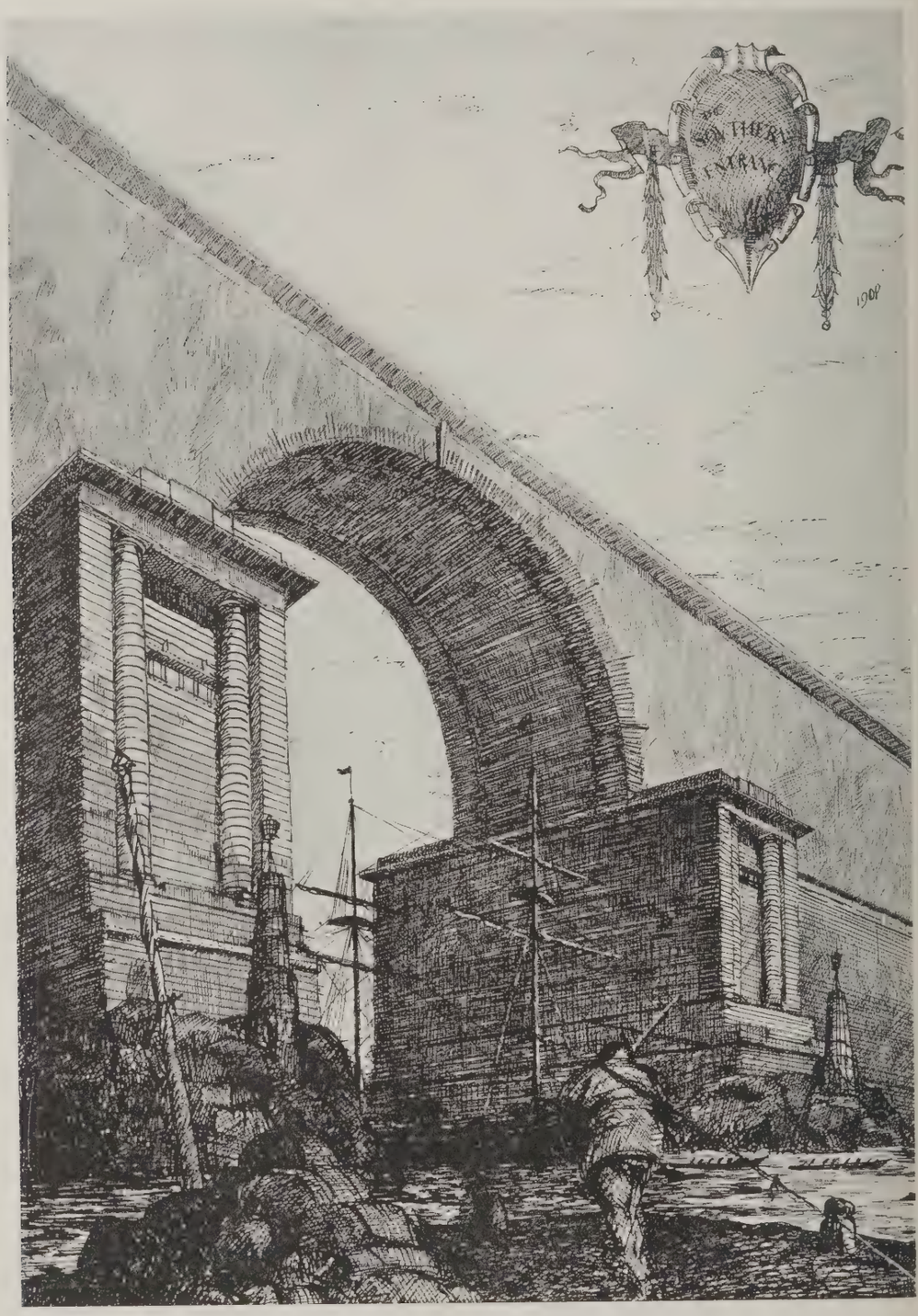
THE BALUCH REGIMENTS GROUP CENOTAPH, KARACHI.
ANDERSON, MELDRUM, AND ASARPOTA, ARCHITECTS.

This cenotaph, which was unveiled by the Prince of Wales on the day of his departure from India, is built of pink Jodhpore stone, the main portion being of six monoliths finely jointed. Inscriptions in English and Urdu are in V-shaped incised letters, gilded. The bronze crests of the five regiments were cast by Messrs. H. H. Martyn & Co., Ltd., of Cheltenham, and the contractors were Messrs. Kalla Galla, of Karachi.

27-29 Tothill Street, Westminster, S.W.1.

"The Southern Entrance"

From a Drawing by G. Gilbert Scott, R.A.



In addition to his unique ability as an architect, Mr. G. Gilbert Scott has the rare gift of imaginative draughtsmanship. His powers in this regard are brilliantly displayed in the above dramatic conception of the entrance to a harbour on the southern coast. The dark mass of the foreground, with its suggestion of maritime activities, provides an impressive contrast with the giant arch, its immense piers set upon rugged rocks, and the bleak expanses of towering wall surface on either side.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.
lnesday, April 26, 1922 Volume LV. No. 1425

The Artist and the Manufacturer

OLYMPIA is not the Royal Academy. Yet there is no reason why Olympia should not be a temple of the Arts. Not of the fine arts, but of the useful arts. Applied art should be omnipresent, ervasive. Certainly it should be strongly in evidence building exhibition if anywhere.

this year's Building Trades Exhibition it seems more usually prevalent. Throughout Olympia there is rvable what may be termed decoration with decorum often perceptible in the stands themselves as in the ifarious articles displayed on them.

-day there is everywhere—not only at Olympia but ondon *passim*—a marked tendency to mitigate the ity of direct business methods by the introduction of urable addenda—of flowers, for instance, interspersed the articles displayed in shop windows, on counters, generally, in positions where, until recently, one would have dreamt of seeing them except in florists' shops. ourse, this pretty fancy, hitherto very much more manifested in the shops of Continental towns than ose in London, may be merely ephemeral—a part of 'brighter London" schemes of which one hears too and sees too little. Whether or not it is no more than ase of a passing craze, as rootless and unnourished as ut blooms that minister to it, the practice of casual adornment has found its way to Olympia, where tiful flowers in handsome pots are frequently to be and certainly they give us a brighter Building Trades bition.

eir presence is gladly tolerated in what would formerly been regarded as a highly incongruous environment. at a symptom of a developing sense of beauty? It is l events of hopeful augury, for the sight of beautiful s and colours in unaccustomed places must certainly to stimulate that sense.

is undeniable that the sense of beauty is innate, but tunately that sense may easily become atrophied for of exercise; whereas the frequent contemplation of tiful forms and lovely colours cannot fail of the site effect of educating the eye and of reviving the of beauty that is innate in all normally constituted ns.

s, indeed, because we have got so far away from nature we have got so far away from art. That is no mere ertonian paradox; it is but a variant on Ruskin's asser- 'that the living power in all the real schools, be they or small, is love of nature"; and that "the main which needs to be superadded is the gift of design"—is, the choice of forms and colours, and their arrange- into pictures or into patterns.

sign, of course, is largely a matter of artistic and ical training. But the power to produce and the r to admire are alike matters of use and wont; and is sudden adoption of flowers to soften the asperities isiness one would fain see a revived sense of natural y, leading on towards truer art and a saner and r appreciation of it in all its manifestations.

is a truism that art and utility should always go hand in hand—that a thing need not be ugly simply because it is useful, any more than that its usefulness depends on its ugliness. That the Building Trades Exhibition has, in the course of years, done very much to promote the useful arts there can be no possible doubt. Year by year we see the gradual but certain prevalence of beautiful form, agreeable colour, appropriate design, in almost everything which relates to building.

In too many instances comeliness has been made subordinate to convenience. Take the kitchen range for example: In past years it was evident that a range might be (or might not be, for that matter) replete with ingenious devices for cooking and heating, and yet be the ugliest object in the house, with fender, fireirons, and other hardware to match. Such awful monstrosities are now very rare. They have been beaten out of the field, as in the end ugliness always is in the unequal competition with comeliness. Modern kitchen ranges are apt to be quite handsome in shape and complexion, as well as immaculately clean and superlatively convenient.

If these highly commendable qualities can be imparted to a kitchen range—if such a commonplace object of utility can be made quite elegant, a joy to behold as well as to use, as it demonstrably can—is it at all likely that the fireplace in the living-room will have suffered from cold neglect? In the Exhibition there is much cheering evidence to the contrary. While it is probable that to the engineer, rather than to the architect, are due the many excellent improvements in the design of the kitchen range, it is certain that it is to the architect that we are chiefly indebted for the more recent and very extraordinary reforms, both in efficiency and in appearance, that within recent years have transformed the fireplace into its present state of elegance and comfort.

It was inevitable that the fireplace should receive always the most earnest attention of the architect. He has always known it for the soul of the home, at once the focus and the climax of observation. Else why should we be so frequently bereft of our Jacobean or Georgian overmantels, American plutocrats competing for them when the house is at the point of dissolution? Happily the modern architect, following Chambers, Adam, and other giants of the profession, seems strongly disposed to devote high artistry to the design of the overmantel; and fortunately there are workmen sufficiently skilful to give due effect to his conceptions, which is welcome evidence that the British artcraftsman is as yet by no means extinct.

While, however, it is taken as a matter of course that the architect is the proper person to design the overmantel, it is more grudgingly admitted, even by the architect himself, that consequently he should also design the grate or stove which is as the heart of it.

It is understood, however, that the architect's position in this matter is becoming more generally recognized by the manufacturers, who now quite commonly invite architects to make for them designs of those objects that, forming conspicuous and integral features of a house, may easily make or mar an interior by according with or by conflicting

with the architectural conception as a whole of the interior of which it may, as it certainly does in the instance of the "domestic hearth," form a vital constituent part, certain either to make or to mar the *ensemble*. And there is really no longer any reason why the fireplace, the chief, the centre feature of the room, should so often be its very worst, spoiling the entire scheme.

It is often asked why manufacturers so seldom invite eminent artists to make designs of objects of utility; that fact being only too obvious from the character of the goods.

Now, in the matter of general as distinguished from special design, we fully appreciate the manufacturers' difficulties. It is clearly out of the question for the average manufacturer to retain in perpetuity and exclusively the services of an eminent designer. The expense would be prohibitive; nor can the artist be expected to be a Michelangelo for versatility. Besides, an artist of strong individuality usually prefers to keep absolute freedom to work as and for whom he likes, at his own sweet will or as inspiration prompts him. When he is inspired to achieve a really great design, manufacturers do not always care to buy the masterpiece outright. Design for commercial uses, and hence usually for multiplication is, of course, here meant, and the manufacturers' difficulty is obvious. He has to consider not what the design is worth as a work of art, but what it will "bring in" as a commercial speculation. His hopes and fears about it would be much the same as those of the publisher of a book or picture. To what extent does the manufacturer adopt the "royalty" principle, by which publisher and author arrive at equitable agreements? A masterly design for some household requirement—wallpaper, an overmantel, a firegrate—any object of domestic use or adornment—might or might not take the public fancy. If the designer were paid on the royalty system, he would at the worst obtain some indication of the public estimate of the worth of his design, if not a true criterion of its merit, and the manufacturer's share of the risk of loss or gain would be at least equitable. No doubt this system is already in use in a few instances. We sug[gest] that it should be given a more extensive trial, and we in[vite] opinions on the matter.

The Carnival at Olympia

"Tantara, Tantara, Come follow me all,
Carnival, Carnival, Carnival."

CALDERON

One is apt to think of The Building Exhibition as so[me]thing severely practical. The walkers walk, the tall[ks] talk, the stands stand; the only thing nobody ever do[es] to sit, and that is because there are no seats. But a[n] markable transformation was effected on Friday [night] with lowered lights and the mystery of night. The g[lass] arched roof might have been the sky, and the dese[rted] stands a township sleeping under the stars; to all of wh[ich] the ballroom made a gay contrast, with its jazz galle[ries] and coloured various lights, its balloons and purple [and] green arc lamps flooding with broad bands of colour [the] changing shapes of the dancers. The world was in mot[ley] care-free, laughing. It was one of the very best da[nces] the Architectural Profession has had.

The floor was borrowed from the Albert Hall. The [dec]orations combined softness with brilliance. The A[lbert] band realized a great artistic achievement. Every one [was] there, though at the end no one was all there.

The Carnival began with a procession through Olym[pia]. The idea of this was to throw all the confetti (or whate[ver] it is) about, and also (presumably) to purloin what [was] could off the stands before the lights went down. T[hen] everybody went back and danced. A select little comp[any] of celebrities including . . . (No, they must not be nam[ed]) had a select little supper, and other people had o[ther] suppers, but less select. Altogether the show was a g[reat] success, and we are all looking forward to the next [one]. The only annoyance was that one kept on mixing [up] Willie Clarkson with Mr. Fiander Etchells.

Photo: Tom Aitken.

GROUP OF DANCERS AT THE OLYMPIA CARNIVAL.

Genoa: The City of Palaces

By FREDERIC TOWNDROW

THERE is a saying that the Cockney divides the world into two parts—London and the rest of the world. For no matter where he may go, be it Manchester or Durban, Bombay or Brighton, e is out of the Metropolis, and in a provincial atmosphere. n the same way it may be said, with greater truth, that 'rance is divided into two parts—Paris and the rest of 'rance. For when we speak of France, do we not at most imes mean Paris?

Italy is different in this, as she is different from all other ountries in the world. All her famous cities are great ities, complete in themselves. Each has its own atmo- here, in that it is the centre of a separate culture; each as its own traditions, its own history, and its own racial haracteristics.

Louis XIV centralized France in Paris, but Italy is not entralized in Rome. The character of Florence is very

Photo: "Daily Mirror."

THE HOUSE IN WHICH MR. LLOYD GEORGE IS STAYING.

fferent from that of Rome, yet it is something entire in elf; and Venice is like no other city, unless it be Srinagar Kashmir, where the backs of houses are the fronts.

Rome is old, so very old; as are the Roman remains, and e Roman street trams which bump their way along its rtuous streets. Its people are tired and restless, with the ritage of their long urban civilization full upon them.

Florence is beautiful, its streets are quiet, and its people e suave and tender. The Tuscan is an artist now, as he is in the fifteenth century and far away back before the oman domination.

Venice is just a little dissolute, as becomes a sea-side town hich lives on a great past. Its church of St. Mark's is of e East, and one hears the German tongue spoken on its iazza."

Milan is a broad city, modern, clean, and efficient. In industrial progress it has laid out the streets with pre- ion. The Milanese are logical, industrial, and radical; y make some of the most beautiful machines in the world. Yet Milan has the only Gothic building of any size in Italy—its cathedral, which is keyed into the present by a façade with Renaissance detail. Milan has also the most famous Opera in the world.

Of them all, Genoa is, perhaps, the most interesting to us, for it is a nation of merchants and sea-rovers. As long ago as 400 B.C. Genoa was famous as a seaport, her trade was considerable, and it is likely that her ships visited these shores for tin. At the time of the crusades she was the most important seaport in the world. It was here that the ships were made, and from here the great hosts sailed to the East to fight the Infidel. After her defeat of Pisa in 1284 she vied with Venice for supremacy of the Mediterranean, until eventually overcome by that state.

At a still earlier period she possessed settlements in Southern Russia, in Syria, Cyprus, and Morocco, and at Constantinople. Throughout her long history she has maintained this commercial importance. She is not an artistic nation, she has contributed little to the artistic pre-eminence of Italy, she has produced neither a school of art nor artists and architects of great renown; indeed, her whole energies appear to have been concentrated on trade.

Genoa has been called "La Superba," which must be more for her magnificent setting and for the number of her palaces than for the arrangement of her streets and her architectural achievements. She lies among the warm yellow and brown of the Italian Riviera in a great amphitheatre of hills which face the sea. The old part of the town bends like a crescent round the thin margin of the older harbour, which is thick with black funnels and the masts of ships. The more modern part of the town extends to the south-west and into the hills of the east.

The older part is a city of narrow, crooked streets, of hundreds of stairs and inclines, which lead who knows whither? Few but a native can find a house from its number in this strange quarter. Through this, from the station to the

centre part of the city runs one straight road—the Via Balbi; but before it gets to the Piazza De Ferrari—the social centre of the city—it loses itself in a maze on the other side of the Piazza Annunziata. The tram simplifies the matter by diving under the high ground and emerging at length on the Piazza Corvetto, and thence proceeds along the wide Via Roma to the Piazza De Ferrari, where stands the theatre, the post office, the stock exchange, and the great ducal palace. Here at night the piazza is bright with many lights, the cafés are aglow and busy; and here one saunters with the Genoese or parades along those long bright arcades of the Via Venti Settembre.

The more modern part of Genoa shows more sense of town planning than the older, but as the railway station is to the north-west of the town one's first impressions of Genoa are apt to be disappointing. Like London, her

But the largest of the Genoese palaces—the Pala Doria—is not in the Via Garibaldi, it lies up beyond t railway station; and the Palazzo dell' Universita, the m famous of them all, lies on the Via Balbi—that sin straight road from the station.

The Palazzo dell' Universita was built by Bartolomm Bianco in 1623. The entrance court is exceedingly imposi and dramatic in character. From the entrance hall a sta case guarded by two lions runs to a forest of Roman Do columns, beyond which again rises another staircase. (S illustrations on page 613.)

Opposite is the Royal Palace, which was built abo 1650 by the Lombard architects Cantone and Falcone, a contains some beautiful staircases and balconies. It known for the fine views to be obtained from its up rooms which overlook the harbour.

PALAZZO BALBI, GENOA: THE STAIRCASE.

charms are hidden on the first casual glance. If one, instead of tunnelling through the city in the tram, takes the Via Garibaldi on foot, one will learn something of the beauties of the city, for along this road are situated the one-time palaces of the merchant princes of Genoa. There are a round dozen or more side by side. Great massive buildings, more opulent than refined in character. For most of them the architect Galeazzo Allesi, a pupil of Michelangelo, was responsible, but several are attributed to Bartolommeo Bianco, a native of Lombardy who settled in Genoa. These palaces display great ingenuity in planning on limited sites with different levels. For this reason the staircases and entrance courts of some of these palaces are exceedingly imposing.

Besides her palaces Genoa is, perhaps, more renowne her wonderful cemetery. It is not often that one goes city just to see its cemetery, but it is so with Genoa, is characteristic of these people that in their hospitals more human institutions they are as lavish as they sparing in their scholastic and artistic ones.

The famous Campo Santo, or *Cimitero*, lies in the a mile and a half to the north-east of Genoa. It is out in the most wonderful natural setting, and is pla in the grand manner. Flights of steps and broad inc planes lead one up to upper galleries, the central poi which is a domed rotunda supported by black mono columns. Many of the monuments are of architec interest.

The Palazzo San Giorgio, Genoa

Photo : "Daily Mirror."

The Palazzo San Giorgio is prominent at the moment as the venue of the great International Conference which is being held in Genoa. The principal front of the building, as seen through the forecourt, makes a very picturesque composition, with its immense arched entrance set between slightly projecting wings. Note the emphasis of the vertical dimension and the delightful character of the fenestration.

THE CORTILE ABOVE THE GREAT STAIRCASE.

PALAZZO DELL' UNIVERSITA: THE STAIRCASE.
BARTOLOMMEO BIANCO, ARCHITECT.

A Domed Pavilion—Its Construction and Stone-Cutting

By J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

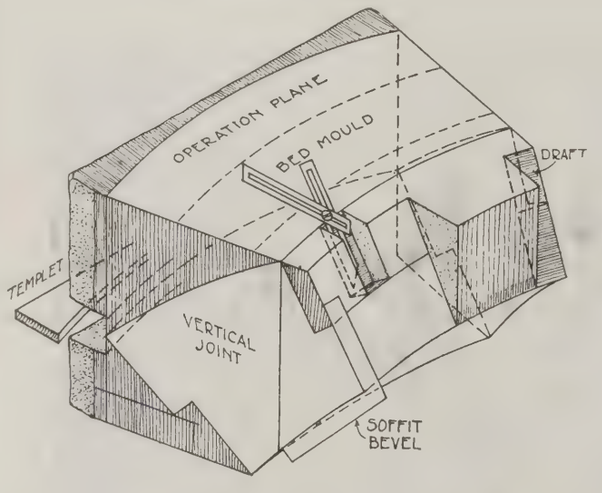
(Concluded from Last Week's Issue)

SINK a draft to contain the soffit arris of the upper conical bed, and square down the small part of the stone directly above this draft, gauging the arris line on this surface parallel to the top bed—see Fig. 14. Now form the spherical surface of the soffit as already explained, and cut the upper conical bed by the aid of a soffit bevel, which is cut from a piece of stout zinc. After this conical surface is cleaned sufficiently, the width of the bed measuring to the rebate is now gauged concentric with the soffit arris. To cut the remainder of the conical bed, set a bevel to the angle which the joint makes with the level plane, and using this bevel sink a series of radial drafts to the required depth. The remainder of the stone between these drafts can now be cut, leaving a clean conical surface. To work the lower rebated conical bed, first sink a draft to contain the exterior arris—see Fig. 14—and cut away the small portion of stone immediately below this. Now sink a second operation plane to contain the arris of the rebate, scribing the arris line on this surface—see Fig. 15. Now gauge the exterior arris from this plane, and form this part of the conical b by cutting several radial drafts. The remaining part of t rebated conical bed can now be formed by sinking intervals radial drafts to the required depth of the reba and by cleaning the surface between those drafts. T extrados and intrados each in turn will be formed as alrea explained, but the former being unseen (after the erecti of the dome) need only be roughly scabbled. Fig. 16 i view of the finished stone.

Pendentive (Fig. 17)

As already explained, the pendentive is corbelled o from the springing level of the arches, rising with a spheri surface until it meets the lower edge of the architrave of t cylindrical drum.

The bed-joints of the pendentive stones may be form either as conical surfaces similar to the beds in the stones a dome, or they may be level as shown in the detail. T former method is preferable for pendentives of large si



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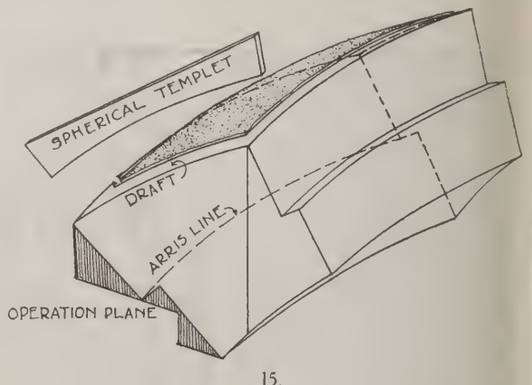

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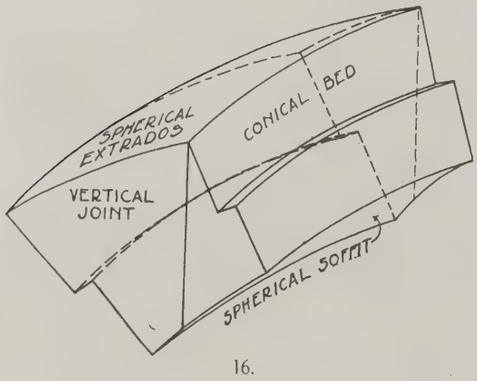

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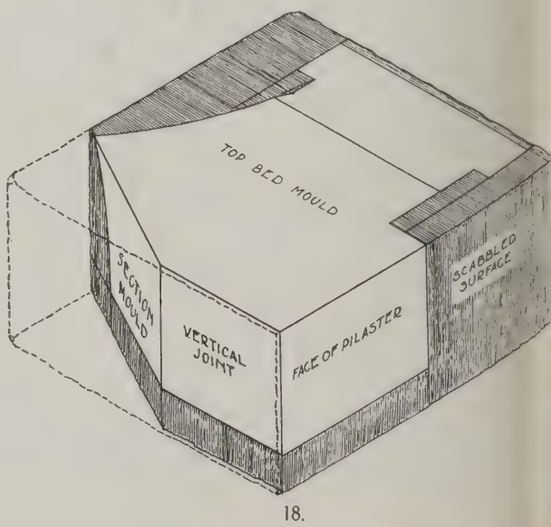

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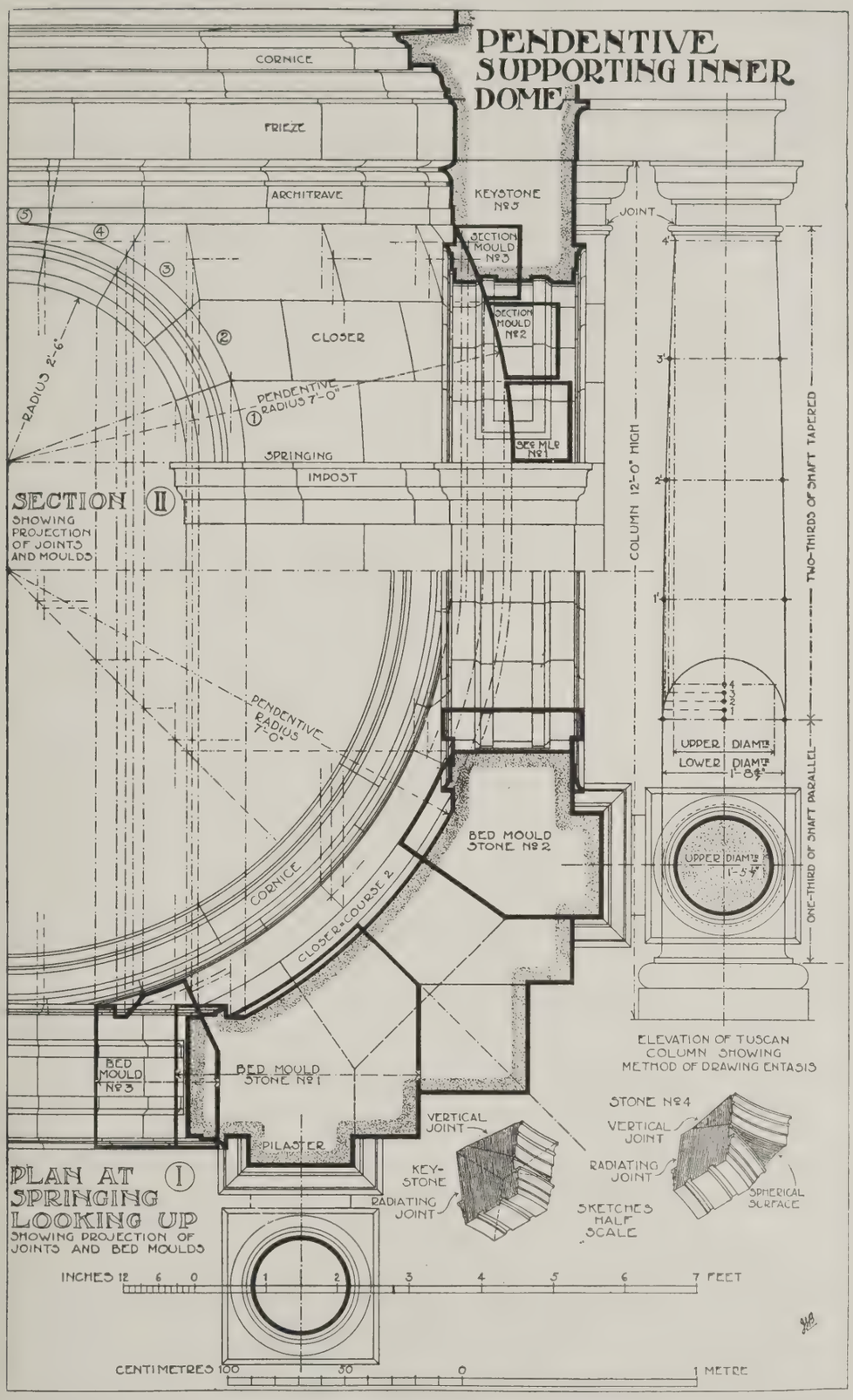
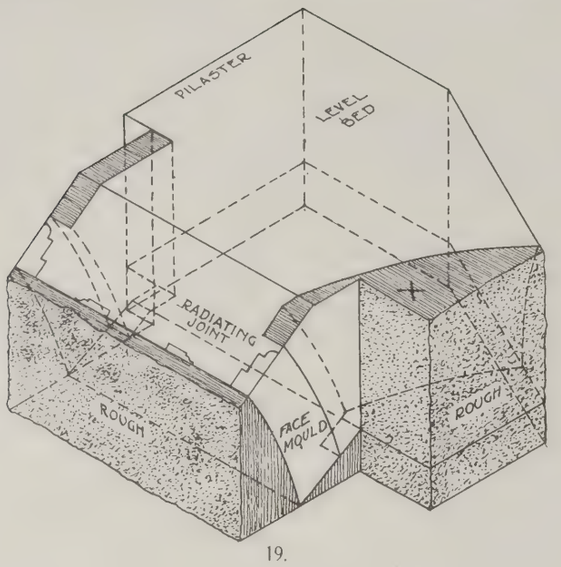


17. PENDENTIVE SUPPORTING INNER DOME: PLAN AT SPRINGING, LOOKING UP.



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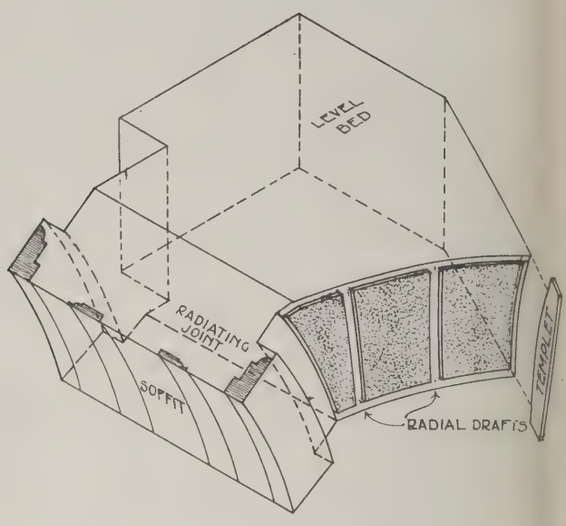

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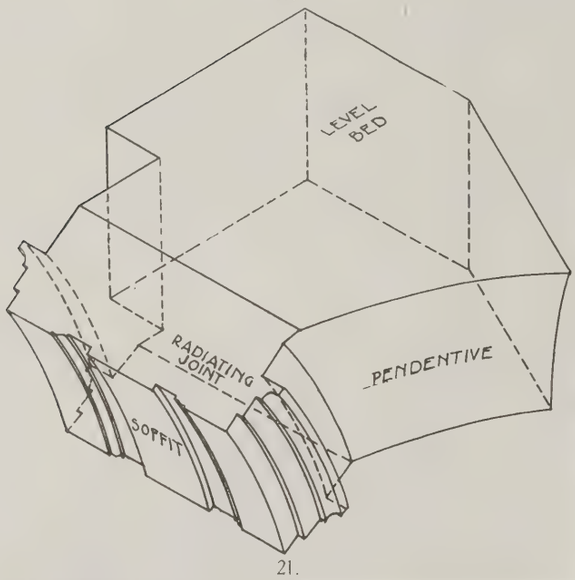


21.

while for a small pendentive, such as that illustrated, consisting as it does of three courses only, the latter method is more suitable.

A good bond is obtained between the arches and the pendentive by designing the jointing so that part of the pendentive is formed on each of the arch stones. By arranging for a narrow flat margin, about 3 in. wide, around the archivolt, a neat intersection with the spherical surface of the pendentive is ensured.

The profile of the pendentive as shown in the section is determined by describing an arc of a circle with the radius 7 ft. shown in plan.

The width of the courses may be alike, but in very large pendentives the lower courses may be made a little wider than the upper courses.

Section or joint moulds for each course are obtained from the profile of the pendentive, and from the elevation and section the horizontal bed-joints are projected.

The vertical joints, like those of the dome, stand in planes which radiate from the vertical axis of the sphere, and these are arranged such that the stones are of convenient dimensions.

The bed-moulds which are projected from the elevation are simply the overall outlines of the various stones.

The method of drawing the entasis of the column will be described when dealing with the construction of the pediment and wall treatment.

Pendentive, Stone No. 2

In addition to the bed and section moulds, there is al required a face mould of the arch taken from the elevatio Fig. 22.

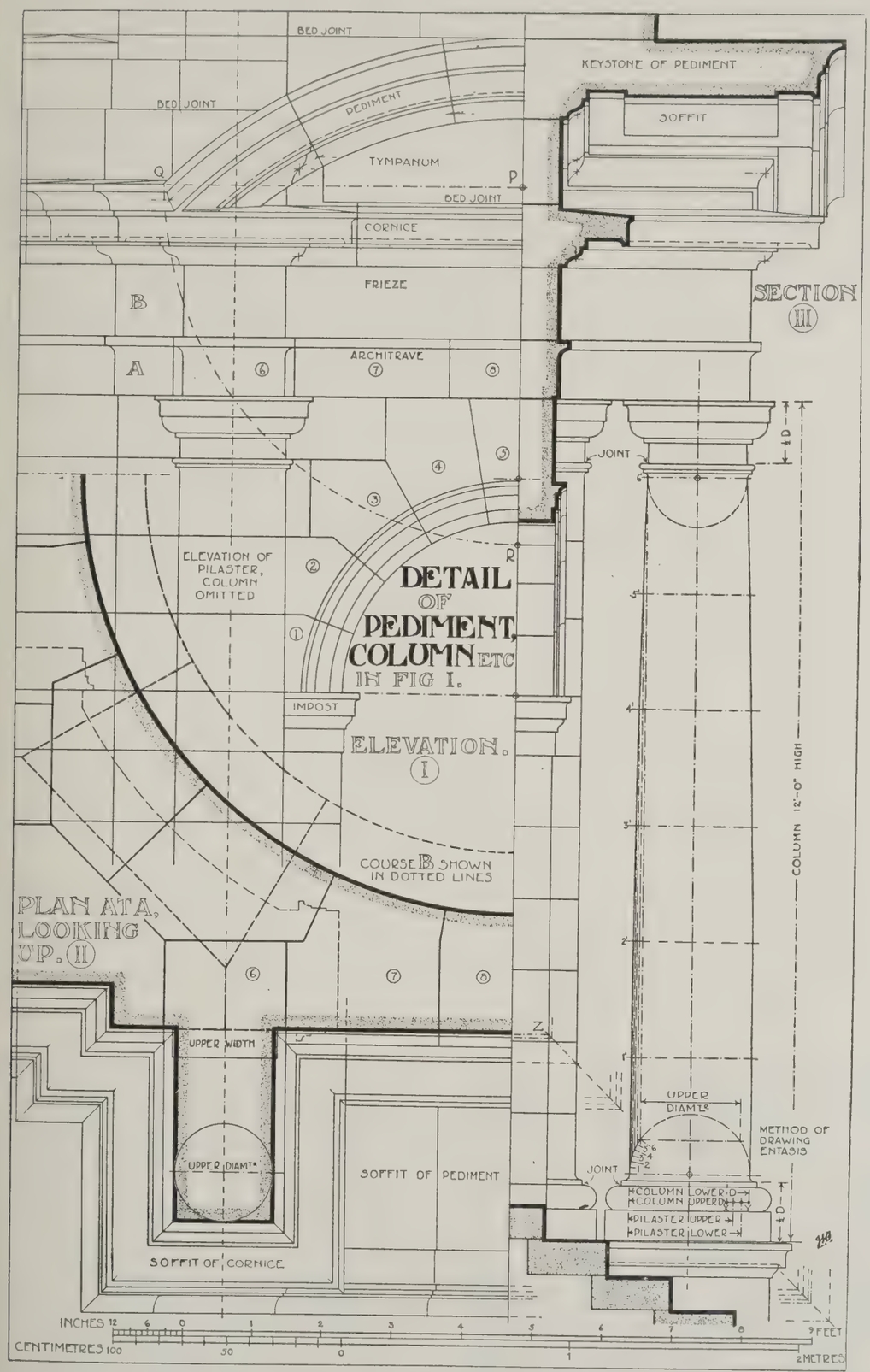
Begin by working the top bed, Fig. 18, the greater pa of which will remain after the stone is completed. Scril as much of the bed-mould as is required, and at right angl to this bed work the vertical face containing the plane the pilaster, also the vertical face joint at the edge of tl pilaster, and the vertical joint of the pendentive. On tl latter scribe the pendentive section mould for course No. On both sides of the stone sink the vertical surfaces contain the face planes of the archivolts and scribe the fa moulds as in Fig. 19. Now take off the upper radiati joint and scribe the archivolt and soffit panel section mould Parallel to the top bed, gauge the depth of the bottom lev bed and turn the stone over so that this bed and the low radiating joint may now be formed. Remove the surpl material at X, Fig. 19, and rough out the pendentive su face to within half-inch or so of the finish, sinking at t same time the margin between the pendentive surface a archivolt—see Fig. 20. The pendentive surface may n be worked to a finish by cutting drafts as shown, guid by a templet taken from the profile curve of the pendentiv care being taken to form a neat intersection between t plane and spherical surfaces. On the opposite side of t stone the vertical surface of the wall between the archiv and pilaster is now formed. The stone may now be co pleted by sinking the mouldings of the panel, and cutting the archivolt mouldings. Fig. 21 is a view of t finished stone. Sketches of stone No. 4 and the keysto are shown in Fig. 17.

Detail of Pediment, Pilaster, and Colum (Fig. 22)

The Tuscan Order, surmounted by a pediment, is us in the treatment of the lower structure, the proportions the order shown being those commonly employed by t Italian masters.

The column has the usual taper, but it should be not that the taper on the pilaster is slightly less than that the column. This arrangement is more satisfactory th when the pilaster is given the same taper as the column, when the pilaster has no taper.

When these two features are employed in close proxim such that both support the same entablature it is essent that the width of the pilaster be properly related to t column.



22. DETAIL OF PEDIMENT, COLUMN, ETC

On the lower diameter of the column set out the amount of the upper diameter and divide the difference (XY, Fig. 22) between the two diameters into three equal parts. The upper width of the pilaster will then be made equal to the upper diameter of the column plus one-third of XY, and the lower width equal to the lower diameter of the column minus one-third of XY.

To obtain a satisfactory relation between the pilaster, column, and entablature, the latter should be adjusted such that its architrave face is slightly set back from the upper edge of the pilaster, and to the same extent overhangs the upper diameter of the column. This is clearly shown in the plan and elevation, the column being omitted from the latter to expose the detail of the pilaster.

The stones used throughout should be as large as can conveniently be handled, and "cube ashlar" only should be used. The arrangement of the jointing in the lower part of the structure is simple, and that of one course is shown in the plan II of Fig. 1. The jointing in the vicinity of the arches has to be designed in conjunction with the pendentive already fully detailed in Fig. 17, the level beds of the courses being continued from the outer face of the wall to the surface of the pendentive immediately behind. The architrave course A, on the exterior, is arranged to coincide with the frieze of the drum on the interior, and, as shown in the plan, stone No. 6 extends from over the column to about 16 in. into the solid masonry. The exterior frieze, course B, coincides with the cornice of the drum on the interior, and the stones are purposely made large so as to ensure a good bond over the smaller stones of the course immediately below. The jointing of this course is shown by dotted lines in plan.

A light effect in the design of the pediment is obtained by arranging the upper member of the curved cornice to rise from a point Q, about a foot from the edge of the horizontal cornice. The centre R for describing the curve of the pediment is determined by drawing an arc from the point P, with radius PQ, equal to half the width of the pediment.

The design of the jointing in the pediment has to be carefully considered, the most important stone being that which forms the junction of the pediment and horizontal cornice. This stone should extend as nearly as possible to the inner face of the drum, and should be large enough to include the "breaks" in the horizontal cornice as shown in the plan. The block required for this stone as measured from the elevation is approximately 4 ft. 9 in. wide, and 2 ft. 6 in. high, its length being about 5 ft. 9 in. The remaining stones of the pediment where they enter the solid work have level beds. Although more expensive, this method is preferable to the formation of curved beds, which are sometimes used, the guiding principle being that bed-joints should, if at all possible, be perpendicular to the pressure.

The stone forming the tympanum, however, has its up bed curved, but in a pediment of large dimensions in wh the tympanum is built up in courses the curved corr may then with advantage be square-bonded to fit in w the courses of the tympanum.

The interpenetration of the fascia and bed-moulding the pediment with the inclined plane of the weathering carefully shown, and this can readily be projected from section. The several "breaks" of the cornice and pe ment mouldings are sufficiently well shown in plan, ele tion, and section to be understood without further desc tion, but to simplify the projection of the cornice in p a line is drawn with a 45 deg. set square from the poin where the wall face line in plan intersects the wall face l of the section. By projecting down from the cornice a pediment in the section to this line, the members in plan very simply projected.

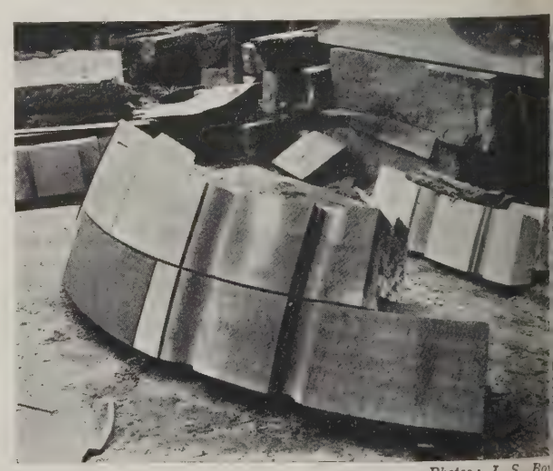
In setting out the columns, draw first the axis, mark off the total height, 12 ft. The lower diameter, D, of column used, is one-seventh of its total height—1 ft. 8½ —the capital and base being each half D in height. At lower end of the shaft draw a semi-circle to represent diameter, and complete the drawing of the moulded b the total width of which is one and two-fifths D. Comp also the drawing of the capital, the projection of wh beyond the upper diameter, is one-fifth D.

To draw the entasis of the column as shown in Fig. set off the upper diameter such that it cuts off an arc of semi-circle. Divide this arc into six equal parts, and divide the height of the shaft into a similar numbe parts. From the figured divisions on the semi-circle p ject to the corresponding divisions set out on the vert height of the column and figured 1′ to 6′. A fair cu is now drawn through those points, giving the requi entasis. On the drawing floor round wire nails may lightly driven in at the figured points, and by bendin wood lath around the nails the entasis curve may be fir drawn.

It will be observed that in this example the colum tapered from end to end of the shaft, but an alterna treatment of the entasis is shown in Fig. 17, in which lower third of the shaft is parallel, the remaining two-th being tapered.

To set out the entasis as shown in Fig. 17, draw a s circle over the lower diameter, and on this mark the up diameter, drawing a line through the point 4. On axis of the column divide the distance between this and the chord of the semi-circle into four equal part to 4. Divide also the upper two-thirds of the shaft a like number of parts, and project from the division the semi-circle to cut the divisions set off on the shaft in points 1′ to 4′. Through these points, as alre explained, the entasis curve is drawn.

EXTRADOS SURFACE CLEANED AND MOULDINGS PARTLY ROUGHED OUT.



Photos: J. S. Bo

TEMPORARY ASSEMBLY OF PARTS OF TWO COURSES STONECUTTER'S YARD.

Professional Fees

By H. V. MILNES EMERSON, A.R.I.B.A.

architect upon receiving from a client written or verbal instructions to carry out any work, when acknowledging or confirming in writing, enclose a copy of the of Professional Charges adopted by I.B.A., and issued by them in a ient form at a charge of 9d. per The architect thus enables his to become acquainted with the f charges, and to adjust any of the f necessary.

chitects would adopt this practice, ajority of disputes that now arise n architect and client over the n of fees would be avoided, and es where disputes did arise, the ct would be enabled to justify arges if made out in accordance ie scale.

he event of litigation between ct and client, practically the first n asked is whether the Scale of ional Charges was handed to the at the time of the architect's tment. If the reply is in the e the architect will probably find ot in such a favourable position to his claim as he would have been adopted the procedure advocated commencement of this article.

n there is a written agreement n the architect and client, a copy Scale of Professional Charges be attached to the document, and art of the agreement.

ealing with a local authority, or ite body, all documents should be seal. Failure to do so would fruitless any action by the architecover his fees.

nditions of Engagement

Conditions of Engagement set ie nature and duties of the architit should be noted by the architect paragraph (*b*), where a clerk of is engaged, he should be insured accident. Omission of this insurould probably involve the client ages should an accident occur the execution of his duties.

graph (*h*) reserves to the architect nership and copyright of all the gs, specifications, and documents d by him. In the absence of this nt these provisions could not be l by the architect.

e 1 deals with the fees chargeable works, and sets forth the various that the architect might be called perform in relation to these fees.

ph (*b*) appears to cause a certain of perturbation among architects how the percentage should be In practice, taking ordinary c work as a basis, an architect be quite justified in using the grading of the scale for works under £2,000. The scale works 211 per cent. added to the six per every £100 or part of £100 below 000 limit. Taking a house cost, £1,000, the normal scale would per cent., which appears a reason for this class of work. If, howfactory building was designed of quite a plain character, it is obvious that a lower percentage than 8.11 per cent. would be reasonable; whilst in a building costing £1,000, and involving a large amount of intricate detail, the remuneration at 8.11 per cent. would prove inadequate. It will be seen, therefore, that the application of this scale does not necessarily mean a normal graduation, but a graduation within the 10 per cent. and 6 per cent., which the architect considers would be reasonable remuneration for his services.

For the reader's benefit, the normal graduated scale would be as follows :—

Cost of Works.	Fees per cent.
£100 or under	10.00
200 ,, ...	9.79
300 ,, ...	9.58
400 ,, ...	9.37
500 ,, ...	9.16
600 ,, ...	8.95
700 ,, ...	8.74
800 ,, ...	8.53
900 ,, ...	8.32
1,000 ,, ...	8.11
1,100 ,, ...	7.90
1,200 ,, ...	7.68
1,300 ,, ...	7.47
1,400 ,, ...	7.26
1,500 ,, ...	7.05
1,600 ,, ...	6.84
1,700 ,, ...	6.63
1,800 ,, ...	6.42
1,900 ,, ...	6.21
2,000 ,, ...	6.00

Clause 2 deals with alterations and additions to existing buildings. This class of work usually entails more detail in proportion than an entirely new building, and provision has been made for an increased percentage of the fees chargeable, up to twice the amount of the scale provided in Clause 1. The architect should base his charges upon the nature of the work and the time and trouble involved in carrying out same.

Clause 3 deals with the design of special fittings, decorations, furniture, etc., the fees to be based upon the amount of work involved. The architect should, if possible, agree a fee with his client before the work is undertaken.

Clause 4. Fees on omitted works.—This clause provides for the payment on omitted works from the contract, at the rate of two-thirds of the fees that would have been received had the work been carried out. This charge is in accordance with the provisions of Clause 6.

Clause 5. Fee for partial service.—This clause provides for fees payable if the project or part of it be abandoned. In view of the fact that the fees claimed for abandoned work often lead to litigation between architect and client, care should be exercised in drawing up the account, and special attention should be given as to whether the fees come under this clause or Clauses 1 and 2. If they come under the latter clause the observations upon Clause 2 would still apply.

Clause 6. Payment of fees by instalment.—This clause provides for the payment of the architect's fees. but the architect can vary this procedure should it be desirable.

Clause 7. Fees when work is executed with old materials, etc.—This clause reads as follows : In all cases where work is executed wholly or in part with old materials, or where material, labour, or carriage is provided by the client, the percentage shall be calculated as if the works had been executed throughout by a contractor, and with new material.

The valuation of the work under this clause would be as follows : Old material would be priced as new, plus cost of labour, etc., and the contractor's reasonable establishment charges and profit. Should the client instruct the architect to engage the workmen, and generally supervise, order materials, and pay all accounts, the architect should only act in the capacity of agent for such work, and he should state in writing at the time of ordering any materials or entering into any commitments with contractors or merchants on behalf of his client, that the creditor must look to his client for payment. Failure to take this precaution would probably render the architect liable for the payment of any orders he might place on behalf of his client.

Clause 8. Services not included in percentage.—Under this clause provision is made for such work not included in the foregoing percentages, the chief items being :—

1. Site or building.—Selection of same, negotiations, surveying, levelling, measurements, and plans of existing buildings.

2. Alterations to working drawings and specifications, preparing new drawings, and making extra drawings for client, contractor, ground landlords, adjoining owners, public authorities, etc.

3. Party walls, rights of light and other easements, etc., litigation, arbitration, services resulting from death or bankruptcy of contractors, or failure or neglect of contractors to carry out the works, also in connection with fire, flood, or tempest during the erection of the works, planning of grounds or gardens, and any other services for which payment has not been provided.

No hard and fast percentage can be given in arriving at the fees that should be charged for any of the foregoing work. Generally, Clause 21 should prove helpful in this case, but the architect should experience no difficulty in making a reasonable charge for the work done.

Clause 9. The fees for housing schemes, etc., having been agreed upon between the Ministry of Health and the parties concerned, and alterations made from time to time as occasions arise, it is not necessary to deal with this clause.

Clause 10. For ordinary contracts the fees payable under this clause are reasonable. It is only on large contracts the fees appear not to be in relation to the work involved. Taking the building to be approved at a cost of £100,000 to £1,000,000, the following would be the fees charged under this clause :—

Cost of Building,	£100,000	Fee,	£1,018 15 0
,,	250,000	,,	2,518 15 0
,,	500,000	,,	5,018 15 0
,,	1,000,000	,,	10,018 15 0

The architect would be quite justified in making any reduction of the above

fees, should the work in his opinion not warrant a charge in accordance with the scale provided.

Clause 11. The nature of an architect's duties under this clause does not permit of a set scale of fees. On matters connected with courts the taxed costs are often, if not invariably, less than the architect's charges. The architect would be well advised to obtain from his client an undertaking to pay any difference between the architect's charges and the taxed costs.

Clauses 12, 13, and 21 deal with works chargeable upon a time basis, and are quite clear.

Clause 14. With the exception of paragraph (*d*) the items under this clause do not call for any comment. In paragraph (*d*) the architect can only charge one-half per cent upon the amount of an interim certificate, provided he has received instructions from his client or other interested parties to measure and value the work executed. In the absence of such instructions the fees payable for preparing and issuing certificates for payment are included in the fees payable under Clause 1. In the absence of bills of quantities the architect if called upon to measure and price the amount of work done would be entitled to charge in accordance with paragraphs (*a*) and (*c*) respectively.

Clause 15. This clause reads as follows: For estimating dilapidations and furnishing or checking a schedule of the same, the charge is five guineas per cent. on the sum agreed, the minimum fee being £5 5s. For negotiating settlement of claim and for other services, the charge is by time in accordance with Clause 21.

Where one surveyor acts between both parties the minimum charge shall be scale and a half, divisible between them.

The wording of this clause is somewhat ambiguous, but the following interpretation appears to be generally accepted by the profession.

The first paragraph provides a payment of five guineas per cent. for surveying and preparing a schedule of dilapidations, preparing or obtaining an estimate of the cost, and serving the claim, or alternatively checking the schedule prepared and served by the opposite party. The payment of the £5 5s. per cent. is upon the sum agreed, but it is not stated how and by whom that sum is to be agreed. An agreement could be arrived at between the surveyors appointed by arbitration, by a court of law, or by the clients independently of their surveyors; but whatever the means adopted in arriving at a settlement it appears that the surveyor is only entitled to charge upon the amount accepted by the lessor. The surveyor is, however, entitled to charge under Clause 21 for time spent in negotiation and other services in connection with the claim. If the surveyor is also appointed to carry out the making good of the dilapidations his charges would be in accordance with Scale 2, or such modification of same as would be reasonable.

The second paragraph appears to be quite clear.

Clauses 18 and 19. The fees in these clauses are identical with those adopted by the Surveyors' Institution, but the order has been reversed, as the architect more frequently negotiates for the purchase of an estate for a client.

The remaining clauses do not appear to require any special remarks.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Repairs to the Houses of Parliament.

During the debate on a vote of £75,250 for the Houses of Parliament buildings, Sir John Gilmour, speaking for the First Commissioner of Works, said that the work of repairing Westminster Hall would be completed this year. The total cost was estimated at £120,000. Decayed stonework was causing the gravest concern to the Department. The decay was obvious. The Department had asked for only a small sum this year, so that they could remove those portions of decayed stonework which would be a danger either to members of the House or to the public near the building. In the circumstances it was impossible to ask for anything like a sufficient sum to replace all decayed stonework at present. This was a matter which went back to the early building of the Houses of Parliament and to the unfortunate choice of stone. It was due also to the fact that connections had been made in many cases by iron dowells. That, by expansion and contraction, led to the splitting of the stonework. This matter could only be dealt with now in a temporary way.

Incorporated Institute of British Decorators

There was a large and representative gathering at the annual dinner of the Incorporated Institute of British Decorators, held in London under the chairmanship of Mr. William Stewart-Greene, the president.

Mr. H. D. Searles-Wood (vice-president of the R.I.B.A.), in proposing the "Incorporated Institute of British Decorators," said that he had been intimate more or less with all the presidents of the Institute. The beautiful drawings which Mr. J. D. Grace—one of the founders of the Institute and president for nineteen years—had presented to the R.I.B.A. were among their choicest treasures.

Mr. J. Scott (vice-president) said that if the name of the Institute was not honoured in this country, at any rate it was abroad. He remembered during one of the trips arranged by Mr. Sibthorpe that the party visited a château in Loire on the wrong day, owing to a mistake having been made. The party was told that it was absolutely hopeless for them to inspect the building as the Grand Duke Nicholas had been there two days before and had been refused. Some cards, however, containing the name and particulars of the Institute of British Decorators were handed in with the request that the party might be allowed to see the gardens and the outside of the château. After a short wait the party was informed that they might inspect the whole house, and the guide who took them over it informed them that he had never been in some of the apartments before.

Mr. J. C. Nicholson (past master and treasurer of the Painters' Company) proposed "The President," who urged the foundation of scholarships for technical classes.

Mr. A. Bernard Cowtan, O.B.E., proposed "Our Guests," the toast being responded to by Sir Henry Tanner, C.B., Mr. Edwin J. Sadgrove (President of the Society of Architects), and Mr. Roland Chessum (President of the M Builders' Association). The toas "The Painters' Company" was pro by Mr. J. Hewson Cantrill, and resp to by Mr. Charles Farris, C.C. (Mas the Painters' Company) and Mr. Cam

R.I.B.A. Poster Competition

It is proposed to hold a compe amongst architectural students design for a poster to be used i premises of the R.I.B.A. for adver the exhibitions of drawings whic held from time to time in the R. Galleries, 9 Conduit Street, W.1.

The poster should be 3 ft. 6 in. hig 2 ft. 9 in. wide over all, and should porate the following:—

Dates. R.I.B.A. Device. Da

EXHIBITION

.....

.....

OPEN TO THE PUBLIC

ADMISSION FREE

Hours.....

Saturdays .....

The design should be in black an only. The competition is confi students in their fourth or fifth y a "recognized" school of archit Each school will be requested to the three best designs of those ex by its students, and to forward th examination by the jury.

The Art Standing Committee R.I.B.A. has appointed a jury co of the following gentlemen to assessors and to make the awar Halsey Ricardo, F.R.I.B.A., Pr S. D. Adshead, M.A., F.R.I.B.A Mr. Alfred Cox, F.R.I.B.A. A of five guineas will be awarded author of the premiated design, a Royal Institute reserve the ri purchase such other designs as th think fit. Designs forwarded R.I.B.A. for examination by the ju be exhibited at the R.I.B.A. G The final date for receipt of des July 15, 12 noon.

Designs should be signed with a or *nom de plume*. The package c ing the design should also contain envelope containing the comp name and address with the motto written upon the outside. The of the competition will be publis the R.I.B.A. "Journal," and also professional press. Any question ing to these conditions should mitted to the Secretary, R.I.B.A later than May 13.

ttle Things that Matter. XII.—Cooking, eating, and Hot Water for the Small House

SPITE the fact that there is a general dissatisfaction with the usual methods of heating a house ins of the open fire, and of obtain- domestic hot-water service from sual Lancashire or Yorkshire these methods still persist, so that on from them is the exception than the rule even in new houses.

a recent experience of house g the writer visited a number of country houses—the kind that it is ed should be run with the assist- one domestic servant, or at the wo. Many of them were old farm- or cottages that had been rnized," or new houses which had rected within the last two years. all of them these effete and labour- ing contrivances exist.

recent report of the Committee oke and Noxious Vapours Abate- shows clearly that the domestic is responsible for five-sixths of the evil and coal wastage, therefore general public to inveigh against icturers is absurd if they them- take no steps to mitigate the evil. loes this evil persist through f other means of providing for services. Manufacturers and in- s have expended time and money ducing improvements and sub- s of every kind, and the market is contrivances, many of them of xcellence, for facilitating cooking, g, and the provision of hot water.

not possible in this article to con- he reasons for the apathy that towards this matter; they are part nical and part due to national eristics and prejudices. But it erhaps, be useful to consider some alternative methods, one or more h should be installed in every new ernized house.

ideal way of solving the whole n is by means of electricity, for at is radiant, there are no fumes, is absolutely clean, but the cost of rrent renders this method pro- e for small houses, even when there ins available, and where the cur- or heating is supplied at about a f that for lighting. People who the possibility of electric heating ooking overlook the immense a- of current required for these s compared with that used for g. A thirty candle-power lamp bout 30 watts, while a radiator, s would be required to heat a good- oom, might use a kilo-watt or watts. Thus it is that, although it ible to instal a small plant to pro- ay, 30 points for lighting, it is quite ible to provide for heating or g. And this difficulty, too, must with any scheme of communal al supply for cooking and heating, to the enormous difference in the luring the winter and summer s, and the wastage of plant that cur during the latter.

comes next for ease of mainte- and cleanliness, but in some country districts gas is still more than 6s. per thousand cubic feet, and this price again makes its general use for every domestic purpose impossible.

It is used most economically where heat is wanted quickly and not continuously; for this reason it is satisfactory for cooking, particularly in the summer, and for heating bedrooms, and for providing hot water to a bath. But for continuous heating such as, let us say, a large sitting-room requiring a fire which consumes 50 c.p. per hour for fifteen hours with gas at even 5s. per 1,000, the cost is again prohibitive. Gas is therefore suitable for cooking, where it is not for a large household, and where baking and roasting is not too frequently done; as an auxiliary means of heating, as in bedrooms and dining-rooms, and as a method of heating bath water. For some households, where continuous hot water to the sink is not considered essential, this may solve the domestic side of the problem. Certainly a modern geyser produces almost instantaneous hot water, and it is easy to have an auxiliary pipe, fitted with a cock, run from the geyser discharge pipe to a wash-basin in the bathroom.

There are, however, small gas-heaters or geysers which can be fitted in a scullery, and which will provide sink water; or there are gas circulators which supply the whole house in the same way as the boiler in the kitchen rage. But if the water in the whole house is to be heated continually this may prove costly. If, however, they are only required at stated times these duties can be performed by means of the geyser and by heating washing-up water on a gas-ring. But it is unsafe to generalize. Thus what may suit one household in a certain house with gas at a particular price, would be unsatisfactory for a differently composed household in a differently designed house with gas at a different figure. The important thing is to have a house carcassed so that alteration and additions to the gas services can be made as the price and as individual requirements vary, without expense and without disturbance to the building.

There are many independent boilers that burn coke and household rubbish and provide a constant supply of hot water at a high temperature, and on some of them a little simple cooking may be done. Such an installation, then, coupled with a gas-cooker, will go a long way to equip a house with a proper hot-water supply and cooking arrangements. One advantage of a circulating system that should not be overlooked is that a hot cupboard can be provided. Some of these boilers will provide radiator heating. This is a very valuable asset, and during the transitional seasons no other heating will be required. It, therefore, simplifies the whole problem, for only in the coldest weather would it be necessary to supplement the radiator in a living-room by means of an open fire. For certain types of plan the anthracite stove provides an efficient and economical method of heating. A stove placed in a large staircase hall and kept burning throughout the winter months will tend to keep the whole house at an equable temperature. In a house with one large studio living-room this method will also prove satisfactory. The modern anthracite stove is smokeless, slow burning, clean, and radiates a very high percentage of the heat which it generates.

There is another method of cooking—and, indeed, of heating—which is rapidly gaining favour, and that is by means of oil. The advantages of an oil stove over the kitchen range are manifold. Foremost are those of economy and cleanliness. To these must be added portability, the ability to place the stove in the most convenient position in relation to the light and other household arrangements, and in the case of a new building, a saving in construction, and an addition to the floor space due to the elimination of the flue and the breast. The latent possibilities in the development of oil are as yet unforeseen, but that these possibilities are receiving consideration is evident from the remarks of Professor Barker in the discussion on Central Heating in Relation to Domestic and Other Dwellings which he opened at a recent meeting of the Royal Sanitary Institute. In the course of his remarks he mentioned the possibility of a pipe service for the distribution of oil to houses.

It will be seen, therefore, that the choice of means is great, and anyone erecting or altering a house for himself would be adopting a short-sighted policy if he failed to make use of some of these improvements. Capital outlay — and there is no reason why this should be more than by the old-fashioned methods—is not the only consideration; the issue must be viewed from a more comprehensive standpoint. For the saving in time due to the easier upkeep of these appliances, and the additional cleanliness, are directly convertible into terms of currency. Thus a house run altogether without open fires might well be worked with one servant where otherwise too would be wanted on account of the extra labour of fire-laying, coal-carrying, and additional cleaning. Or, again, the work of one servant might be so lessened that much of the week's washing might be done at home and heavy laundry bills saved. These domestic considerations it is part of the architect's business to know.

For the man who is building as a speculation, or for persons other than himself, the problem is by no means so simple, for he cannot anticipate the preferences of a tenant or a purchaser, and he must provide some means of cooking and heating, and an oil-cooking stove is not a landlord's fixture. He therefore feels on safer ground if he adheres to the old-fashioned contrivances, and so the useless labour and inefficiency is perpetuated.

His best course is to leave these things as far possible for completion in accordance with the desire of his tenant or purchaser. If this is not possible then he should thoroughly carcass for gas, if

available, instal an up-to-date independent coke boiler for the hot water, with perhaps a radiator or two in hall, bedrooms, and dining-room, and a self-setting range, set at a proper level, and not at the usual low back-breaking elevation. These suggestions are only of the most general kind. There are so many different kinds of grates and ranges performing different services, and sometimes arranged to heat more than one room from one fire. The choice must be carefully made according to the particular plan.

Finally, it may be said that in heating there are two ideals: the one is a method of heating that will maintain a constant even temperature throughout the house, as in certain kinds of central heating; the other is a method whereby concentrated heat may be quickly, healthily, and cleanly generated and extinguished, as in an electric radiator. The coal fire is a travesty of both ideals. H. J. B.

Pattishall House, Northamptonshire

This house is situated about two miles from Towcester village, and was erected before the war for F. Hawthorn Burn, from the designs by Mr. H. O. Tarbolton, F.R.I.B.A.

The bricks with which it is built are of deep red and brindle colour, and were specially manufactured to a small size.

The roofs are covered with Collyweston slates of varying tints.

The plan shows a large music-room with an organ at one end, which speaks through a perforated wood grille. The key-board and stops are concealed behind sliding doors. The organ was built by Messrs. Harrison and Harrison, of Durham, and the bellows chamber with electric motor is immediately below.

The floor of the room is specially swung to form a ballroom when required.

Most of the ceilings of the rooms have plasterwork decoration, either in fibrous plaster or worked "in situ." The modelling of the plasterwork was carried out to a large extent by the architect.

The principal bedrooms have "fitment" wardrobes, etc., and the south-east portion of the house is arranged as a children's wing, with schoolroom and other apartments, with separate entrance.

The stables provide accommodation for nine loose boxes, together with saddle-room, coadchman's room, and groom's room.

The gardens, which are extensive, received considerable attention; a small lake, with boat and tea house, is formed at a lower level on the estate.

The lay-out of the grounds includes an interesting rock garden.

The general contractors were Henry Martin, Ltd., of Northampton, and the sub-contractors were as follows:—J. T. Powell, Northampton (stables: structural work); Scott Morton & Co., Edinl (oak and other woodwork finishi Meikle & Philp, Peterkin, Edinburgh tral heating); George Wragge, Ltd., chester (steel casements); Allan & Edinburgh (marble and tile work). late Joseph Hayes, Edinburgh (p ceilings); Harrison, Harrison & Son, ham (organ in music-room); Th Lawrence & Sons, Bracknell, (bricks—small size—specially made).

The Surveyors' Institut

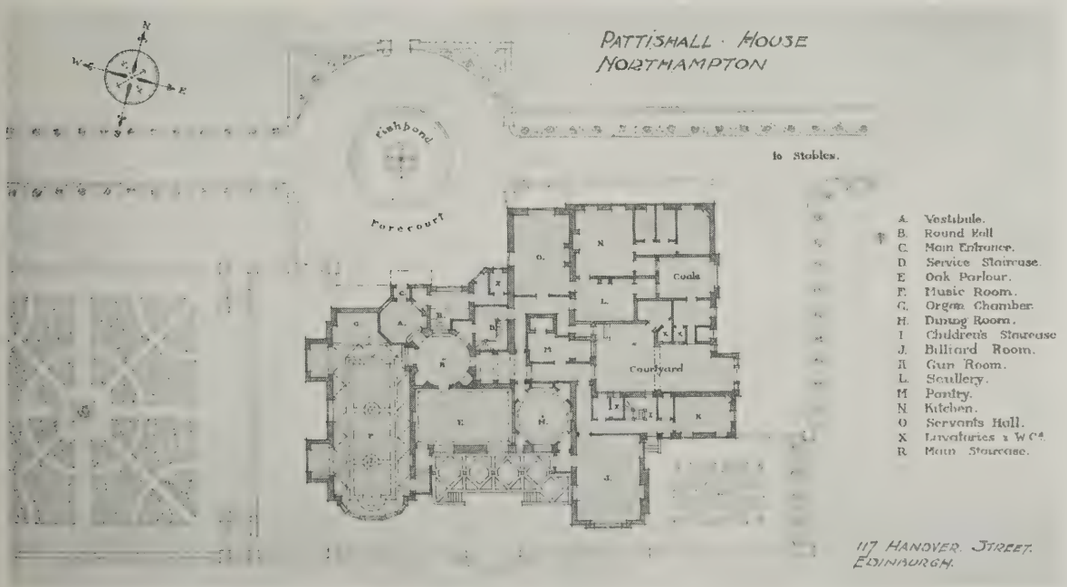
Acting under their powers under laws 46 and 52, the Council of the veyors' Institution have elected Mr. McClare Clark, senior vice-presiden Haltwhistle and Hexham, Northun land, as President for the remainder o Institution Session, in place of the Mr. J. H. Sabin, whose sad and expected death was reported in a re issue.

The Council have set up a Special C mittee to consider the position whi likely to arise in June 1923, on the a Acts ceasing to operate, and to re whether any action on the part of Institution is called for in recommen a renewal or otherwise of the provis of the Acts or any part thereof.

Sir Edgar Harper has been nomin to represent the Institution on Governing Body of the City of Lo College in place of the late Mr. J. H. Si

PATTISHALL HOUSE, NORTHAMPTONSHIRE: THE VERANDA AT THE BACK.
H. O. TARBOLTON, F.R.I.B.A., ARCHITECT.

PATTISHALL HOUSE, NORTHAMPTONSHIRE: ENTRANCE FRONT.
H. O. TARBOLTON, F.R.I.B.A., ARCHITECT.



PLAN OF PATTISHALL HOUSE

THE OAK PARLOUR.

PATTISHALL HOUSE, NORTHAMPTONSHIRE: THE OCTAGONAL DINING-ROOM.
H. O. TARBOLTON, F.R.I.B.A., ARCHITECT.

H. O. Tarbolton, F.R.I.B.A., Architect

An interesting feature in the design of this room is the arrangement of an organ behind the far wall seen in the above view. The keyboard and stops are concealed behind sliding doors, the organ speaking through a perforated wood grille. The floor of the room is specially swung to form a ballroom when required

Correspondence

Rights of Associates

To the Editors of THE ARCHITECTS' JOURNAL.

Sirs,—This matter is very simple. The question is, "Have Associates the same voting powers as Fellows?" The answer is "No."

I understand that nine years ago the Council and the general body decided that Associates ought to have exactly the same powers as Fellows, but this and other important reforms were held up on account of the war, and are now delayed because of the Unification and Registration Committee's proposals. The remedy is very simple; let us get rid of that nuisance and start work on something really useful.

SYDNEY PERKS.

ification & Registration: Complaint from the East

To the Editors of THE ARCHITECTS' JOURNAL.

Sirs,—The correspondence in your columns on the above question has produced many interesting letters from correspondents of very divergent views, but as far as I am aware none from a representative of that scorned race of outcasts, "The outside architects." As a member of that fraternity I should like to point out two disabilities I have found the outside architects to suffer from which, in my opinion, to mismanagement of the Institute's affairs.

Mr. Arthur Keen appears to assume that the Institute could be relied upon to admit to its membership only reasonably qualified men. Theoretically this would appear to be obvious, practically, however, there is not the slightest doubt that many unqualified men are to be found sheltering under the protection of the letters F.R.I.B.A. Most of these gained admittance during the mad crusade for membership carried on, I am writing from memory, about 1906–1909. No doubt many capable architects joined the Institute during this period, but unfortunately the halt, the lame, and the blind found then an easy back door open to them. Thus, alas! did the Institute receive what should have been one of its most cherished possessions, its right to insist that its members were all fully qualified men.

Several of your correspondents refer to the unfair competition some members of the Institute suffer from the outside architect. Has any one ever stopped to consider the unfair competition the outside architect suffers from when an unqualified rival blossoms forth into an F.R.I.B.A.?

Once in my short experience the firm I have been working with has been asked to take over charge of a building under construction, designed by another architect. The architect in each case was an F.R.I.B.A. whose services were dispensed with because a portion of the building had collapsed owing to lack of an elementary knowledge of the safe load allowable on brickwork.

As for elevations, were you, sirs, to start a series of plates, "Works of F.R.I.B.A.'s," I alone could supply you with many amusing or depressing examples, according to one's point of view, always assuming that the law of libel did not intervene.

Do not think that this is written in any spirit of carping criticism. No one wishes more than I do to see the profession unified and the Institute's powers increased, but the Institute must face facts if these results are to be obtained.

Just as in the past the Institute has been too lenient in admitting new members, so at present it seems to have gone to the other extreme. Unless a man is an A.R.I.B.A. when he takes up an appointment in the East or far East he apparently must resign himself to carrying on his career for the whole of his life outside the Institute. Apart from any commercial disadvantages, in many cases not serious, a man keen on his profession suffers mentally from the lack of position and comradeship he feels. This is particularly the case in the East where the architect is in most cases carrying out pioneer work under difficulties which have to be experienced to be understood by men accustomed to carry on practice with all the resources of civilization immediately at their doors.

Did the leaders of the architectural profession lay down that under no circumstances was a man to go out East until he had obtained his A.R.I.B.A., the refusal to give facilities to qualify after arriving in the East would be understandable, though even then not reasonable. But they do not, or at any rate did not at the period I was appointed. I was appointed to a Government post in the East by the then president of the Architectural Association, himself an F.R.I.B.A. I obtained it in open competition despite the fact that I was only a student of the Institute, with my probationary work for the Final only half complete, facts which were known to the president. After serving a few years in this Government appointment and obtaining promotion, I set up in private practice, and now have a large practice with many completed buildings to my credit or discredit.

Despite this, when I approach the Institute regarding admittance, all they do is to supply me with a paper showing the date and conditions of the next examination in London.

In other words, they suggest that I should spend my rare leave (I have been home once in eight years) in sitting for an examination in London based on conditions and methods of construction which are in nearly every case diametrically opposed to the conditions governing the design of buildings in tropical countries.

The thing would be ludicrous if it were not so inept. I have quoted from my own case, but it is typical of many. Examinations based on eastern conditions should be obviously held in the East for assistants; there are many senior F.R.I.B.A.'s in the East quite capable of organizing such examinations on behalf of the Institute if they are given the necessary instructions.

This examination should be largely modified or omitted entirely in cases when a man is in practice for himself and can show photographs and working drawings of buildings constructed from his designs. What better test of an architect's ability can there be than the buildings he has constructed? The fact that unqualified men have been admitted by this method in the past is no reflection on the system but only on those who administered it.

The lack of interest the Institute shows in the pioneers of the profession is exemplified in India by its acquiescence for years without protest in the exploitation of its younger members by the Government of India, an exploitation which only ceased when the architectural profession as a whole became aware of what was going on and when it became apparent to the Government that if persisted in it would be impossible to obtain junior architects.

It may be possible to unify the architectural profession, but the Institute will not be able to bring this about until the vision of those in authority is extended beyond the view to be obtained from the windows of the Conduit Street premises.

"ONE OF THEM."

To the Editors of THE ARCHITECTS' JOURNAL.

Sirs,—In a letter published in your issue for April 12, the representatives of the R.I.B.A. Defence League submit that they have not mis-represented the views of the Unification Committee, and in support of their contention they purport to quote the remarks which some of the speakers made at the Unification meeting on May 12, 1920, as reported in the "R.I.B.A. Journal" of May 28, 1921.

I am quoted by the Defence League as saying that "Scheme A was the bringing of all the architects in the Kingdom into the R.I.B.A. That meant what it said." "Even if they had all the architects in the Kingdom in the Institute, etc."

The foregoing is an unauthorized abbreviation of the following passage in my remarks as reported in the "R.I.B.A. Journal." "Mr. McArthur Butler said . . . "Scheme A was the bringing of all the architects in the Kingdom into the R.I.B.A. That meant what it said, *he hoped, and that they were all going, by some means yet to be devised, to be members of the Institute* . . . even if they had all the architects in the Kingdom, etc." The italics are mine, and represent the words deleted from the reprint of my remarks by the officials of the R.I.B.A. Defence League to suit their own ends.

I am credited by the Defence League with having sufficient intelligence in common with others accurately to express my thoughts in words, and I may, perhaps, be permitted to enquire on what grounds and with what object the representatives of the Defence League deliberately mis-quote my remarks and therefore misrepresent my views on the main point at issue.

C. McARTHUR BUTLER.
Secretary of the Society of Architects.

"The Commercial Ideal"

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Walker, unlike some who have addressed you on this subject, has done me the justice to read my paper with attention; and, in his letter published in your issue of the 29th of March, addresses himself to a matter which, though not the main point raised by me, is one that directly touches architecture as one of the Arts.

The facts are before us; they are not disputed, and our differences on the signification of those facts arise from disparity in the gauges we severally apply to them: we are not, that is, estimating the facts, but measuring ourselves against the facts. To acknowledge this does not put an extinguisher upon our discussion, but rather raises the subject to a plane where debate is most stimulating and most likely to be profitable.

There is, as we know, "no accounting for tastes." A man may like eel-fishing, orchestral music, sugar in his tea, hate novels, and have a horror of slugs—or he may not: but no purpose is served by enquiring, or disputing, his reasons. *Taste*, on the other hand, is a most proper subject for challenge and discussion, for in taste is involved our thoughts, conduct, convictions, aspirations, affections—our entire relationship to life, in short; and taste is not only open to challenge, but is bound, when challenged, to give an account of itself.

It is not enough for me to say that I consider it a horrible outrage on good taste to use—in an advertisement—a quotation from Holy Writ as a punning recommendation of a new kind of hairpin: I must be prepared to justify myself by showing that my opinion is in accord with a consistent view of life as a whole; and my reputation among men and my position as a citizen of the world is involved in that avowal of principles.

Mr. Walker will not, I know, challenge me to justify myself in the case I have supposed; but if I expressed the same opinion of the same use for a similar purpose of an inspired passage from literature, he certainly would expect me to show good reason for my views, for this is just such a case of Art used to further trade which he commends; and he specifically objects to Mr. Reginald Hallward's expressions of displeasure at Ruskin being quoted in advertisements of cheap furniture.

I am going to accept Mr. Walker's challenge. The issue between us shall be displayed, not as an abstract question, but as an object lesson—a practical test case. I will apply Mr. Walker's pleas of justification to the above instance, and present my own views; but I will ask Mr. Walker to accept my assurance that, by whatever expressions of indignation and contempt I may discredit the ideas he has presented, I intend no discourtesy to him. He has set forth, in a frank, direct, and lucid manner, opinions that are widely held; he has not expressed a personal conviction (as I believe), but has, rather, interpreted the colour of the life and the thought that surrounds him—he has, in fact, voiced the crowd. I do not think he has given any serious thought to the subject, but that he has been brought up short by ideas that are new to him and foreign to what he understands to be the amities of life. That many should find ideas new and foreign which are as old as humanity, and to which, and to which alone, we owe all that makes civilization a progress and not a retrogression, is the aspect of life which I deplore. My conviction is that the bias of thought which Mr. Walker reflects is an unspeakable disaster; that in its chief characteristics it is a new thing; that its influence is spreading; and that the life of the community and the aspirations of the rising generation are being poisoned. It is necessary, therefore, that the terms in which I express myself should be not inadequate to my convictions nor to the cause I pursue.

Mr. Walker, then, approves of the use of passages from the writings of Ruskin to advertise cheap furniture; I, on the other hand, agree with Mr. Hallward in deploring it. Such an advertisement must be in essence, and by intention, a falsehood. Ruskin is quoted because the public associates his name with high discrimination in matters of Art and craftsmanship; and he is quoted in spite of the fact that advertisement and flashy pretentiousness in workmanship were in the forefront of those falsities that he most abominated. Were Ruskin now alive no more cruel and disgraceful insult could be offered him than to use the weight of his name and opinion in advertisements, and for such a purpose; and no one would dare the outrage, for he could well take care of himself. Now that he is dead, and fear of consequences no longer holds its refining sway in the soul of the advertiser, this insult is offered to his memory in disparagement of all he lived, and suffered, to bestow upon the world.

Is Mr. Walker impressed with the fact that Ruskin gave away the whole of his private fortune and sacrificed a great part of his energies in lending practical shape to his ideas for the moral health and happiness of humanity; or does he think him a fool for his pains? Assuming, for the sake of the argument, that Ruskin's practical precepts are often valueless, and that his theories are often built on conclusions which are fallacious because derived from limited observation of facts; even on that assumption, what natures, what motives, what achievements are men to esteem, if not his? He did not strive for himself; he was among the most lofty-minded of men; he had the soul of a poet and the pen, and his industry to his last days when he sat crouching over his orderly portfolios and notebooks at Coniston was, as a humble observer described, "appalling."

If we are not to cherish the memory of such glorious men in affection and respect, to what purpose are we educated human beings? Ignorance may have its excuses, but Mr. Walker does not offer that, or any other excuse, for the vulgar profanations he commends. The spirit of the dead Ruskin is exploited with calculated dishonesty to spice up an appeal abhorrent to that spirit; lofty thoughts are brought into public association with a pitiful vocation—the retailing of rubbishy pretences at craftsmanship; the rich savour of that thought and the cadence of the beautiful phrases in which it is conveyed become part of the contemptible, shrieking clamour of trade bragging which surrounds us on all sides; Art and high purpose have their entrails torn out to bait a trap, and Mr. Walker says that such exploitation, brings the expected reward, is *fundamentally right.*

This doctrine is so essentially fals any conceivable code of ethics that amazed that anyone could give se utterance to it. We have only to sider the meanings of the words "ri and "fundamentally" to know this. say that any course of conduct is "ri *because* profit accrues to the indivi who pursues it is, in the strict meani the word, nonsense; to say it is "fu mentally" right is a perversion of moral principles which make the e ence of any community possible. would, rather, be true to say that course of action which had profit fo sole object was "fundamentally" *wr* that for it, in any particular case, *n* be wrong would depend upon the na of that course of action and its res The crucial point in judging the gui innocence of a prisoner is whethe profited by his acts or not. A case is prominent in the papers in which conduct of certain directors of a p company seems open to question. whole point is—had they, or had not, any intention of profiting? principle *Cui bono?* (Who benefited one of the oldest recognized in law. suggest that a thing can be right bec it is profitable is mere waste of tim say it is fundamentally right is to ex hopeless confusion of mind. I am pressed that Mr. Walker should forward such statements as weig supporting his commendation of Commercial Ideal. Presumably he think of no better.

Mr. Walker further supports the a of the trader by claiming for hi certain merit in bringing the writin Ruskin into prominence. A man was not acquainted with the Autho says, might by means of such adve ments be led to read his writings. surely, is special pleading carried t bounds of absurdity. We are not cerned with what "might" result are dealing with certitudes, with p bilities. It is true that if Mr. Walke myself were playing on the same course our balls "might" collide in air, but it is fatuous to put this for as an exigency of the game. Ar who adopted Mr. Walker's method m with as good reason, condone the bl up of Westminster Abbey on the gr that the spectacle of the ruins migh some persons to the study of G architecture. In addition to all thi law, which is not given to sentimen decided that extracts from serious lit work applied to the trivial purpo advertising a commodity inflicts i on the author. The case in whic Kipling was led to take action is fr our memories. The offending adve made the best case he could for hi but did not attempt to justify his a the ground that he aimed at profit.

Mr. Walker, by implication, attri to me the view that Art has been "p tituted" for the sole sordid purpo monetary gain. I have not so exp myself. The word I used was ploited." He also quotes me as lik the influence of Commerce to the ra of mange on a dog's back. I have likened it.

Yours faithfully,

H. B. CRESWI

ome Further Notes on the Exhibition Stands

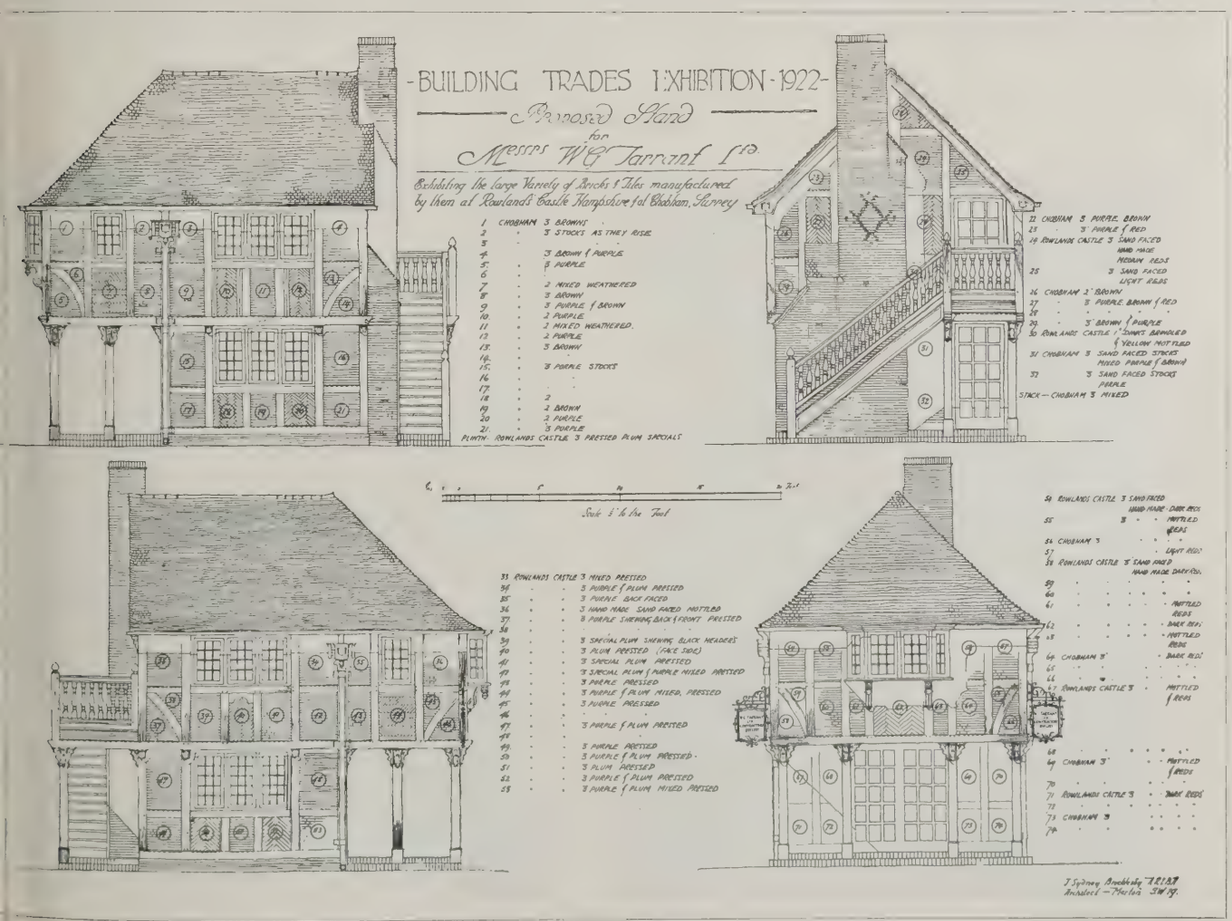
SKILFUL application of brickwork may be seen at the stand of Messrs. Eastwoods, Ltd., which exhibits is types of the company's bricks in rm of an apartment of simple design. ing a few feet in front of this is a n red and yellow brick, pierced in the by a wide segmental arch having ting voussoirs—three bricks wide nuing upwards and finally stopping horizontal courses. There is much cter in the work, but the thinness wall is very apparent in the soffit arch and the jamb reveals of the ng.

ssrs. W. H. Collier & Co. have d a small building with semi- ar half-brick arches spanning the ngs on either side. Old English ricks are used for the structure, presents a warm and rural effect asing character. The roof, which is ed with hand-made rustic tiles of al colour, has a texture of great y, and adds much to the distinctive rance of the exhibit.

garden house put up by the Brick and Estate Co., Ltd., and of the company's Weald Clay pro- from the designs of Mr. H. J. S. ns, is well proportioned, and in ent taste. It has flat pilasters at ngles, and arched door and window

(*Continued on page* 633.)

PERSPECTIVE VIEW.



"AN ELIZABETHAN GAZEBA." STAND OF MESSRS. W. G. TARRANT, LTD

Some Stands at t

G R. SPEAKER AND CO.

J. A. KING AND CO.

FAWCETT CONSTRUCTION CO.

POLLARD AND CO.
(Showing part of new shop front for Pontings, Ltd.)

uilding Exhibition, Olympia.

LEINE PATENT FIRE-RESISTING FLOORING SYNDICATE.

VULCANITE, LTD.

EXPANDED METAL CO., LTD.

FENNING AND CO., LTD.

Stands in the Building Exhibition at Olympia.

THAMES MILLS

JOHN BOOTH AND SONS.

enings on three of its faces, and a nbered gauged brick arch over the ndow head on the fourth.

Various kinds of the firm's special cks are introduced, and skilful use is de by the architect of simple moulded ms. There are paved gangways on ner side, and the interior shows the plication of a coved brick skirting. the casements are of steel, and over the r is a leaded fanlight of effective design. The stand of Messrs. Carter & Co., Ltd., n open one, and on one side of it is a ess enclosed by wing walls having pilastered terminations of ceramic marble stoneware. These possess much character architecturally speaking, and are good examples of their kind. On the wall surfaces are displayed various types of decorative tiles, and over the central fireplace is a fine panel of exceptionally rich lustre-ware tiling.

In concluding this short descriptive account of some of the more architectural stands, the writer has pleasure in calling special attention to that of Messrs. Arthur Sanderson and Sons, Ltd., whose pavilion possesses high merit as a design, and is conceived on thoroughly logical lines.

Constructed of canvas on a light wood frame, the white surface is relieved by the application of narrow marginal strips of black paper. This treatment is singularly effective, and has been carried out with reticence and in a very refined manner. Formal emphasis is thus given to the main constructional lines, and the deep recesses which have been formed for the reception of the company's distinctive and highly-coloured wall-coverings are admirable for the purpose.

The Concrete Institute at Olympia

Mr. Etchells's Address

There was an extremely interesting eting of the Concrete Institute at Olympia on Tuesday, April 18, when Flander Etchells presided over a discussion on concrete in which some really nable points were raised. Mr. Etchells ve a sort of ten-minute introduction ich, by the way, lasted much more n ten minutes), in which he dealt ly with the training of the concretor, secondly with recent developments he industry. To-day, he said, there temporary reversion to brick conction, and if we train concretors in numbers there is every likelihood of e being no employment for them when ned—a condition of things which the itute prefers to leave to Government artments to bring about. That the and for concrete has fallen off, he t on, is due to the bad methods of rete construction employed by cer- "stunt" firms who advertise themes flamboyantly and then make a s of their work. Such methods have most injurious effect upon the health he concrete industry, but they can be down to the primary fact that people ot realize that skilled labour is essen- n concrete construction.

Among the recent developments in the stry Mr. Etchells touched on the ring of concrete, mixing machines, cranes, tests in steel, etc., but the interesting part of his address ed when he touched on the work of men—Dr. Oscar Faber and Mr. ington Hudson—whose investigawill have the greatest influence upon future development of reinforced ete. Mr. Harrington Hudson's book is method is to be published shortly hatto and Windus, and the concrete l is eagerly awaiting the event. In ning up, Mr. Etchells came to the conon that in future it would be essential nploy specialists in reinforced con- construction, since calculations were ne so complicated that no architect l be able to cope with them in ion to his ordinary work. Therethe design of reinforced concrete l fall into the hands of the engineer. the discussion which followed, Mr. ton suggested that the training of d men should be pressed on with, the very existence of skilled men l give the necessary impetus to ng in the concrete industry, and Harrington Hudson and Mr. Ness asized the importance of the expert concretor. Mr. Harrington Hudson also related his experiences with concrete in India, where he has been practising as an engineer, while Mr. Olliff-Lee laid great stress upon the necessity of skilled foremen. He had been working in Mesopotamia, he said, with totally unskilled labour, and on coming home to pick up foremen for supervision purposes he had encountered the utmost difficulty in finding anyone suitable, since there was no way of telling whether a man was competent or not. He suggested that the Institute should issue certificates to competent men, so that the engineer should have some guarantee to go upon. Mr. Etchells in reply expressed his admiration of Mr. Olliff-Lee's suggestion, and asked him to put it in writing so that it might be seriously considered by the Concrete Institute.

Concrete Roads and Highway Bridges

An interesting discussion took place last Wednesday when Dr. Oscar Faber read papers on the above subjects.

Introducing the speaker, Mr. Etchells, who was in the chair, said that the two subjects were closely related and constituted the oldest, and at the same time the newest, of concrete problems. The Romans had used concrete, and had made the bed thick owing to the chances of subsidence in wet weather. In the hands of their successors Roman roads had lost their straightness, but their bridges of steel and concrete stood to this day.

Speaking of concrete roads, Dr. Faber said that the subject was of interest to the whole community, and concrete roads were undoubtedly the roads of the future. They were, however, in many cases being wrongly constructed.

The three problems of road construction were the carrying of loads with sufficient distribution of weight, the provision of a hard surface, and the resistance to frost and other disintegrating agencies. With regard to the first, he had seen roads on a peaty basis subside an inch under a heavy weight, and spring up again after it had passed. This occurred chiefly in Ireland and the Thames Valley. The quantity of reinforcement was often insufficient: a double layer was necessary.

The surface problem was one for legislation. The cost of roads could be reduced by the use of rubber tyres for heavy loads, and this might be made compulsory. In the United States, where concrete roads were universally successful, steel tyres were practically unknown. It should be realized that for road work a special form of concrete was necessary.

With regard to the third problem, the absence of porosity was the most important factor. Certain stone aggregates were quite unsuitable, and only those should be used which absorbed not more than 3 or 4 per cent. of their own weight of moisture. With proper reinforcement contraction cracks should not occur. The inaccessibility of drainage and other pipes had been raised as an objection to concrete roads, but the difficulty was exaggerated. With the help of the oxy-acetylene lamp reinforced concrete was easier to cut through than wood blocks, etc.

Specially constructed subways for drains were a development of the future, and the ventilation question could be solved.

With regard to highway bridges Dr. Faber said that the type to be adopted in any particular case must depend on the special circumstances ruling, but where these allowed, the arch type was to be preferred for reinforced concrete. This was often lighter and cheaper than any other type, and frequently enabled bridges of the arch type to exceed in span what would be a limiting figure for bridges of the girder type when dealing with a relatively heavy material like reinforced concrete.

Comparing the relative advantages of bridges of steel and reinforced concrete for highways, Dr. Faber said that steel bridges left with the steel exposed were lighter than those protected with concrete, but were subject to a continual upkeep expense for repainting.

For moderate spans reinforced concrete was cheaper or equal in cost, but where the span became excessive the steel bridge was cheaper because of its greater lightness.

It was sometimes stated that the advantages of steel bridges over concrete lay chiefly in the greater ease of erection, but in the case of highway bridges over railways, canals, or roads, the difficulties of erecting concrete bridges were generally quite easily overcome. For example, the bridge carrying the road and tramways over King's Cross station, where head room was very cramped and no interference with the railway traffic could be tolerated, was successfully constructed of reinforced concrete.

Further Special Features of the Exhibitio

4.—Bricks and Tiles

By FREDERICK CHATTERTON, F.R.I.B.A.

IT is certainly a significant fact that the exhibitors of bricks, tiles, and clay goods generally should be outnumbered to the extent of over 60 per cent. by those firms which specialize in concrete construction and machinery.

If this condition of things is due to superior organization on the part of the concrete construction companies, the lesson should not be lost on the brick manufacturers, who could, if they chose to combine, present a very strong case for the consideration of architects.

Whatever the cause, it is very plain that brick, one of the oldest building materials in the world, appears to be far less in evidence at the exhibition than concrete, its most recent and formidable rival. That this should be so is a matter for regret, and there can be no doubt that the deduction which may be drawn from such an indication is one that also calls for the earnest attention of brick and tile makers all over the country.

The point has been urged with some force by a writer in "The British Clayworker," from whose observations in that journal—made during the exhibition of last year—the following quotation is extracted: "The principle of co-operative publicity, to which reference has already been made, could have been applied at Olympia in a most telling fashion, if a really worthy structure—showing, for example, the application of 2 in. facings—had been erected from the designs of a front-rank architect, as a joint exhibit of those firms which specialize in them. It might have taken the form of an entrance lodge to a park, or a club pavilion, and its erection in a central position would have conferred upon it a distinction which would have made it the most conspicuous feature in the hall. Architects and the public would thus have been presented with an object lesson which would have produced a lasting effect on their minds, and 2 in. facing bricks would have been more widely discussed than any other material in the exhibition. The building itself could have served as a rest-room for the public, or a central information bureau for the trade, and within it might have been displayed a few specimen bricks of individual firms."

With regard to the manner in which this year's display of brick and tile exhibits is presented to the public and the profession, it must be admitted that it differs very little from that of the two preceding exhibitions. In this, the third of the present series, it is, to those who remember the previous ones, almost needless to consult the catalogue! Quite a number of well-known firms exhibit the same well-known products on stands of familiar appearance, situated on the same sites as before.

Reference having already been made in the critical "Notes on Some of the Stands"—published last week—to the enterprise of Messrs. W. G. Tarrant, Ltd., whose magnificent exhibit is attracting such general attention, it is only necessary here to mention a few of the very numerous types of bricks which fill the panels of this fine half-timbered structure. These comprise examples from the Rowlands Castle brickworks, as well as from the Chobham brickyards, and each bears an unobtrusive name label. One of the chief aims of the company is to produce a durable facing brick possessing the æsthetic qualities of Old English bricks. Among the specimens which call for special mention are hand-made mottled sand-faced facings, and plum-coloured pressed facings, from the Rowlands Castle works; and hand-made light reds and purple stocks from Chobham. Of very distinctive appearance, too, are the Rowlands Castle tiles which cover the roof.

Multi-coloured Old English facings—2 in. and 2½ in.—are recognized specialities of Messrs. S. and E. Collier & Co., of Reading, whose stand gives an excellent idea of their application. Their inherent charm is enhanced, if anything, by the joints, which are "raked" out with a piece of stick. The battlemented parapet above is of the same clay and texture, and is based on old examples.

The firm's tiles, which also deserve mention, are most artistic; and though they are naturally red, other tints can be produced by applying colour during manufacture. One such, termed the "farm-house" tile, is the last word in mellowness.

Another tile manufactured by the company is similar in all respects to that selected by Mr. Ralph Knott, F.R.I.B.A., for the roof of the London County Hall. This is known in the trade as the "Chinese" tile, and is of the single pantile type so largely used in Italy and Spain. It is interesting to note that where the building to be roofed is concave on plan, these tiles require to be specially shaped, in order to ensure continuous horizontal tail lines and uniform width of channelling.

Besides a display of the firm's "silver greys," so much favoured by Mr. Giles Gilbert Scott, R.A., Messrs. Collier show a very attractive fireplace of old English briquettes with hearth and curb of the same texture. The lines are good, and the herring-bone patterned cheeks, segmental arch, and tiled key form distinctive features of the design.

At the stand of Messrs. Lamb and Sons, which was designed by Mr. Lionel Littlewood, Licentiate R.I.B.A., the full beauty of this firm's Worcester Park multi-coloured sand-faced bricks can be well seen.

They are made from the same clay which was used in Tudor times for the bricks at Hampton Court Palace, and the company's success in producing bricks hardly distinguishable from the old ones has induced the Office of Works to enter into a contract with the firm for the supply of all bricks required for the repair and upkeep of the fabric.

The makers also show their Godstone engineering bricks, which are highly vitrified, very heavy, and are stated to be acid-resisting.

Messrs. W. H. Collier & Co. exhibit a very representative range of bricks and tiles manufactured at Mark's Tey, near Colchester, and these include multi-colo or brindled red facings of excellent appe ance. The coarse texture resulting fr the grade of sand used by the mould will be much appreciated by architec This firm's tiles are conspicuous for th artistic qualities, and as shown on t roof of their stand remind one of an countryside barn.

The Sussex Brick and Estates Co., Lt whose well-designed stand was co mented upon and illustrated in the l issue of the JOURNAL, make a feature their Weald clay products, which inclu Southwater engineering bricks hav a crushing strength of 509 tons per squ foot and an absorption of only o These bricks, unlike others of this cl can be used with good effect as fac bricks, and are made in red, mottled, brindled shades. Hand-made sand-fa bricks, purple stocks, and flared reds natural texture are also exhibited, as u by Mr. Morley Horder, Mr. Bur Downing, Messrs. Greenaway and N bery, and Mr. Searles-Wood.

It is worthy of mention that this fi by varying the temperature in the ki is able to produce from one field a ra of bricks varying from highly vitri engineering bricks to sand-faced fac bricks of the most delicate hues, and t in the process no artificial treatmen resorted to for producing the colours.

It is pleasant to see at the stanc Messrs. Eastwoods, Ltd., this fir highly successful revival, in the form very close approximation, of the London yellow stocks of one's stu days, as they existed before they supplanted by Peterborough Flett These bricks are known in the trad Conyer machine-made stocks, and d from the original London stocks—w were hand-made, clamp-burned, and c only be made in the summer—in important respects, namely, that are kiln-burned, and that their manu ture can be carried on throughout year.

Specimens of the company's red fac —a little too uniform in colour, perha D.K. hand-made stocks, and Fle bricks, are also exhibited.

Entirely new exhibitors are Me Webb Bros., Ltd., who show on a small stand a selection of their Ba down tiles, made of Cheltenham clay the Lower Lias formation. These attractive examples of hand-made and their chemically produced co range from stone colour, through browns, to shades as deep as indigo.

The Pressed Brickmakers Associa Ltd., which comprises twelve firm engaged in the manufacture of Fl bricks, are exhibiting two new var of this class, in an endeavour to p larize Fletton bricks for face work. of these is moulded to represent a r face of stonelike appearance, an intended to be set on edge as an skin in cavity wall construction, an other—laid flat in the ordinary w is scored vertically with deep wavy produced by combing.

onvincing evidence of the insulating fire-resisting properties possessed by er, which is made from a diatomaus earth obtained from Denmark, can obtained at the stand of the Moler proof Brick and Partition Co., which artly constructed of the company's ow wall blocks. A special feature is application of the newly introduced ent "T" block cavity wall system of struction, together with various les of plywood affixed. The primary antage of this system is that it affords ctual insulation, but it is also very ptable as regards interior finish, extremely light in weight, and is in no way subject to condensation. Specimens of Moler slabs for boiler insulation and cold storage are on view, as well as that most popular exhibit, the small insulating brick which floats in water.

Patented interlocking tiles of exclusive patterns and much ingenuity, such as those exhibited by Messrs. H. J. and C. Major, Ltd., the Somerset Trading Co., Ltd., and Messrs. Colthurst Symms & Co., Ltd., are in a very literal sense hardy annuals, and so familiar to architects as hardly to need describing afresh., This also applies to Messrs. Stanley Bros., Ltd., whose exhibit of glazed bricks is to all intents and purposes a replica of last year's display.

In conclusion, one would like to draw attention to the improved design of the Frewen cavity brick, which is exhibited by the Tourba Construction Co., Ltd. In its modified form the block is of lighter weight, but loses nothing in strength.

The Frewen block is the only one known to the writer which interlocks on all four edges, and it has the further merit of providing an uninterrupted circulation of air throughout the walls.

5.—Sanitary Goods

By NANDY HOSKINS, M.S.E., M.R.San.I.

MR. H. GREVILLE MONTGOMERY and his coadjutors are to be congratulated on the excellence he exhibition. The whole of Olympia ally occupied. While several old and lar exhibitors are not represented, exhibition is, as usual, full of interest, there is quite a comprehensive dis- of sanitary appliances and fittings.

Messrs. Doulton & Co., Ltd., of Lam-, occupy a large stand in the centre he exhibition, and have a good selec- of their high-class sanitary fittings. one half of the stand there are four pletely equipped bathrooms in various es. The outstanding feature is the ured Doulton ware "Keramos" lava- es. These lavatories, only recently oduced, are particularly pleasing in earance. They can be made in urs to suit any scheme of decoration, are specially suitable for bedrooms dressing-rooms. The lavatory suites prise shelves with jewel cups, tum- s and tooth brush holders, and tiling f the same ware. The basin has a flat e top at the back, which makes it a venient standing-place for toilet re- ites, etc.

ther interesting exhibits are the mbeth" vulcan ware sinks, the er ones having two soap trays, and shallower ones, without overflows, a le soap or brush tray. The trays are of the sink itself and eliminate the rate wood or zinc soap tray. Water t basins are shown in several pat- s. The white Queensware pedestal th closet has a ramped seat, and is mmended by the medical profession. ther w.c. worthy of mention is the el type. It is made of heavy "Vul- vare," and when fixed is entirely clear he floor. It is largely used for hos- l work, as it leaves the floor without ruction for cleansing purposes. Doul- s patent w.c. cistern silencer is a ll and simple appliance. It can be l to existing cisterns in a few minutes, prevents all noise arising from the ing of the cistern. There is also a flushing valve for w.c.'s which elim- es the usual cistern. The valve, h has been approved by the Metro- an Water Board, works quite noise- y, and is easily actuated. Whether lever be held or not, the valve closes the quantity of water for which it been regulated and sealed has passed. firm also exhibit for the first time a new "Simplex" mixing valve, for use with bath sprays. It appears to have advantages over the older types, and water to any available temperature, from cold to hot, can be obtained by turning the lever handle through less than half a circle.

Messrs. Ewart and Son, Ltd., of Euston Road, N.W., have a very effective display of their geysers. These heaters are excellent labour-saving devices, and economical with regard to fuel. The "Califort," among the various types working, will supply almost instantly a constant supply of hot water to bath, lavatory basin, or sink. The heater is not necessarily placed in the bathroom, so that the air of the room, which is frequently of small dimensions, is not vitiated from the products of combustion, or unduly heated. Some fine quality porcelain enamelled baths, and their "Industria" water-heater and patent basin and bath, for new housing schemes, are also to be seen.

Various models of earth closets are exhibited by Messrs. Moule's Patent Earth Closet Company, of Gray's Inn Road. Some of the types are specially selected for rural housing schemes. These closets should appeal to many rural authorities where the sanitary accommodation is often much neglected.

Messrs. Sharp, Jones & Co., of Parkstone, Dorset, are again in evidence with their rock concrete sewer specialities. A complete rock concrete sewer manhole, including concrete cover, circular and egg-shaped sewer pipes up to 6 ft. internal diameter, bends, junctions, and other fittings, are among the articles on view, together with a good selection of salt-glazed pipes, fittings, and specialities of Dorset stoneware.

Full size sewage distributors, actually in use on filters, are a feature of Messrs. William E. Farrer's stand in the gallery. Their "Facile" distributor is shown at work on a 14 ft. diameter bed, and is controlled by a low draught syphon. Farrer's automatic tipping distributors, working on a 9 ft. by 4 ft. filter, are also shown. These are particularly well-made appliances, and are suitable for use in connection with small installations for country houses, institutions, and isolated communities. The fact that they require the minimum attention to ensure satisfactory working is a consideration where the sewage disposal plant is under the control of inexperienced persons.

Messrs. John Knowles & Co. (London), Ltd., of King's Road, St. Pancras, give prominence to their patent jointed "Free-flow" pipe. This is to be seen in comparison with a somewhat exaggerated defective plain jointed pipe. The "free-flow" has many advantages. It is self-centering, has no bitumen rings, and is not a grouted joint.

The Ames Crosta Sanitary Engineering Co., Ltd., of Nottingham, have a small but very interesting exhibit in the gallery. The "Simplex" process of purifying sewage by the activated sludge method is demonstrated by a glass working model. There is a big future for this method of sewage treatment, for which the firm claim to be one of the pioneers.

Among the exhibits of The British Construction Company, of Barnstaple, are reinforced concrete posts, slabs, and other specialities, and concrete tubes, both glazed and unglazed on the interior, for use as sewers or water mains. These pipes are made of finely graded material by a special tamping process, and appear to be of excellent quality and finish. It is understood that they can be supplied at a low cost in diameters of from 9 in. to 36 in.

The Patent Lightning Crusher Co., of Rosebery Avenue, E.C., exhibit two of their crushers, which have been adopted by several municipalities for the pulverizing of house refuse. One of the crushers has been in use at Southwark since 1906, and it is able to deal with all kinds of refuse, including slaughter-house and other offal.

Messrs. W. and J. Glossop, of Halifax, have an interesting collection of incrusted water mains, and include their patent "Pourcleer" water main cleaning apparatus. Many hundreds of miles of mains have been dealt with successfully by this firm in various parts of the country.

Messrs. Tuke and Bell, of Lincoln's Inn Fields, W.C., show chain pumps for sludging purposes, double-acting lift and force pump for raising sandy and gritty water, and a pneumatic ejector for crude sewage; the Waterex Company, Ltd., of High Holborn, W.C., hand and power pumps in operation, for handling crude oils, hot tar, and other vicious substances, and a valveless pump, the "Rotoplunge" is shown by the Clee Hill Granite Co., of Clee Hill, near Ludlow. It is claimed that this pump will raise anything from tar to water.

The Phœnix Engineering Company, of Chard, Somerset, exhibit their "diaphragm" pumps in operation. The capacity of these pumps is from 1,000 to 6,000 gallons per hour, and they are adapted for hand or power.

The Laffly Company, of West Kilburn, N.W., have an interesting exhibit of road-sweeping plant, and their motor gulley emptying machine.

Drain clearing appliances and testing machines are being shown by some well-known exhibitors, including Messrs. Cakebread, Robey & Co., H. Hart, and Ward & Co. Nothing worthy of any special mention, however, was noted with regard to these useful and indispensable appliances. Messrs. Cakebread, Robey & Co., of Wood Green, have divided their interesting exhibits over two stands. In addition to stoves, boilers, etc., there are lavatory basins, bathroom fittings, and pedestal closet suites. Their stands are, as usual, well stocked.

Firms exhibiting damp-proofing materials for walls are as usual, much in evidence. Messrs. Geo. M. Callender & Co., of Victoria Street, Westminster, show a model reservoir with sloping sides, lined throughout with bitumen sheeting. This material has been used largely for lining reservoirs, swimming baths, filter beds, etc. They also show the material used as a damp-proof course, and other interesting specialities. The exhibits of Messrs. F. McNeill & Co., Vulcanite Limited, and others, afford a good selection for this class of material.

The British Everite and Asbestilite Works, Ltd., of Manchester, exhibit a motor garage to accommodate two cars, and designed to demonstrate the many uses to which their asbestos cement products, in the form of corrugated sheeting, flat building sheets for walls and ceilings, roofing tiles, slates, rain-water goods, etc., can be employed. This material would appear to be particularly suited for both indoor and outdoor work.

The British Fibrocement Works, Ltd., of Erith, also exhibit a fine selection of asbestos - cement manufactures. The building exhibited is partly covered with corrugated "Fibrent" sheeting in natural grey colour, and partly with "Fibrent" slates in various colours. The walls, both interior and exterior, and floor are constructed to show the various methods of applying this material in modern construction. Among the advantages claimed for this material, economy, rapidity of construction, fire-resisting properties, and freedom from rust or decay, without the necessity of painting for preservation.

A stall of general interest to all branches of engineering is that of the Cement Marketing Company, Ltd. Here an excellent working model, showing the whole process of the manufacture of Portland cement at its various stages, as carried out by the leading manufacturers of the country, is being shown. Actual tests as laid down by the British Standard Specification, are also being carried out by experts of the company.

There are several other exhibits of particular interest from a sanitary standpoint, and the exhibition generally is well up to its usual high standard.

Some Further Notices of Exhibits

RANSOME MACHINERY CO. (1920), LTD.

Row K, Stand 194, and Gallery Bay, No. 26.

The Ransome Machinery Co. (1920), Ltd., have two large stands showing an extensive range of the latest constructional plant of interest to building contractors, surveyors, quarry and slag owners, civil engineers, and all others interested in this class of labour-saving equipment. The exhibits include the following: a Standard ½ cub. yd. batch-type concrete mixer; new lightweight tilting-drum 5 cub. ft. concrete mixer; "New-Method" aero concrete mixer; section of a steel concrete hoisting tower; 6 cub. ft. concrete tip-cart; portable tar macadam drier and mixer; "D" steel sheet piling for cofferdams and reservoir, canal and marine work; and a 14 in. concrete-pile helmet.

Address: 14–16 Grosvenor Gardens, London, S.W.

THE SUSSEX BRICK AND ESTATES CO., LTD.

Row J, Stands 188, 189.

This exhibit is in the form of a brick pavilion, which has been specially designed to demonstrate what great strength and true alignment, artistic effects, and pleasing tints can be obtained by using Weald clay bricks. The brick drawn special attention to is the vitrified Southwater engineering or sewer No. 1, which has crushing strain 509 tons to the square foot, and porosity under one per cent. (0.83 per cent.). It is used largely for sewerage schemes, bridge work, waterworks, bank strong rooms, etc.

Address: 52 North Street, Horsham.

EASTWOODS, LTD.

Row F, Stand 121.

The building erected by Messrs. Eastwoods, Ltd., is constructed of materials of their own manufacture. It has been designed with the object of displaying to the visitors the appearance of their bricks massed in bulk in actual work. The main façade to the avenue consists of a segmental arch with pier abutments, the bricks themselves being known as Eastwoods' conyer machine-made stocks and red facings. The elevation of the interior structure facing avenue F is faced with Eastwoods' Shoeburyness hand-made stocks and red brick dressings. The elevation to avenue E is composed of a similar arch to that facing avenue F, only it is built entirely with Eastwoods' Halstow machine-made stocks.

Address: Belvedere Road, Lambeth, London.

THE DAVIS GAS STOVE CO., LTD.

Row H, Stand 144.

This company exhibit all their following well-known grates and geysers: 10 in. "Cæsar" gas grate; 10 in. "Brutus" gas grate; 0A "Cupid" gas grate; 1A "Neptune" gas grate; 2A "Minerva" gas grate; 3A "Royal" gas grate; "Relief" cooker, 18 in. stand; No. 93 cooker, L.W.T.; No. 108 cooker; No. 118 cooker; No. 2 "Auto-Economic" circulator; Item 30 copper; No. 40 copper; "Hector" geyser; S.O.V. 16 "Perfecta" geyser; 1–50 "Shamrock" geyser; A–55 "Shamrock" geyser; No. 5 "Midget" geyser; No. 5S "Midget" geyser; No. 3 "Cambridge" geyser; No. 7 "N.H." cast-iron gas mantel register with interior; No. 7 cast concrete gas interior suite; new "Nautilus" coal fire; "Sentry" boiler; and "Nautilus" gas flue block system.

Address: 60 Oxford Street, London, W.1.

THE LONDON WARMING CO., LTD.

Row L, Stand 223.

Amongst the exhibits of the London Warming Co., Ltd., are a domestic heating and cooking apparatus comprising latest models of the gold medal "Kooksjoie" coke or anthracite range (self-setting, continuous burning) in actual working; the "Wifesjoie" one-ring gas cooker in actual working; the "Florence" patent open-fire boiler grate with ra[diators], showing system of heating a wh[ole] house by one fire; and specimens of [its] quality porcelain-enamelled baths.

Address: 20 Newman Street, Lond[on]

J. SAGAR & CO., LTD.

Row A, Stand 2.

This firm is exhibiting the "Premi[er] combined hand and roller-feed plan[er] and thicknessing machine; band saw[ing] machine; semi-automatic chain-cu[tting] and hollow chisel mortising and bo[ring] machine; vertical spindle moulding [and] shaping machine; four-cutter ball-bea[ring] moulding and planing machine; build[er's] tenoning machine; single spindle dim[en]sions sawing machine; and the he[avy] double-geared roller-feed planing [and] thicknessing machine.

Address: Canal Works, Halifax.

J. JACKSON, LTD.

Row K, Stand 212.

On this stand J. Jackson, Ltd., [are] showing their "Wytallite" non-staining non-tarnishing metal, and also [their] patent non-leak taps. This metal is the result of long and severe tests and experiments, and after prolonged immersion in sea-water, urine, soap solution, caustic soda, acids, vinegar, mustard, etc., shows no sign of stain, neither is it affected by atmospheric changes. It has been [also] proved by the Metropolitan Water Board.

Address: Daydawn Works, Bramley, Surrey.

STIMEX GAS STOVE CO., LTD.

Row B, Stand 13.

The cookers are constructed on the "Stimex" patent principle, with extra burner chambers for the oven. The bottom of the oven is closed, and the burners are placed in separate chambers at the [side] so that the heated air is sterilized before passing into the oven. This is claimed by the makers to be a big advance in cookery construction, as it keeps the [oven]

from contamination during cooking, further shows economy in gas con- tion. The Stimex Company show al sizes of cookers, all fitted on the e principle. Another innovation is all-gas combination range—this en- takes the place of an ordinary coal ener. It gives hot water at all times e house service, and a special feature e gas fire for heating the kitchen. parate gas circulator is also shown, circulator being arranged for giving ater service. The efficiency of the lator is very high, and it being fitted a thermostat the gas is automati- shut down as the temperature of the rises.

dress: Stimex House, Balham Hill on.

RIPPERS, LTD.
Row C, Stand 43.

s firm is showing a very wide range ds, including a new type of hospital various hardwood and softwood , elm greywood doors and panelling, various mantels and decorative lings. In the housing and ordinary y section they are showing their t dresser, patent revolving cup- , and indispensable step-chair, to- r with the usual types of housing y.

dress: Castle Hedingham, Essex.

WCETT CONSTRUCTION CO., LTD.
Row J, Stand 174.

Fawcett Construction Co., Ltd., naking their chief exhibits the 'lithcrete" and tubular systems of ig, and the "Edwardian" chimney- "Mon'lithcrete" girders are con- ed of rolled steel and concrete. oncrete takes the vertical compres- that is to say, it does the work of ession web members in lattice s. Twisted hoop steels are passed gh the web openings and buried in oncrete, as bond in the opposite on. The rigid and monolithic uction thus obtained is claimed to per cent. stronger than ordinary steel joists and concrete. The firm that these girders cannot fail by ng; that they are spaced 50 per wider than ordinary joists; and there is practically no deflection. Edwardian" pots are made in red, and brown, and their nominal is 24 in. They are suitable for quare flues or 11 in. round flues.

ress: 65 Victoria Street, London.

SOOLE AND SON, LTD.
Row J, Stand 192.

feature of Messrs. Soole and Son's is a short flight of oak stairs, with carved panels to newel and a ed rail. This stairway — the ne of its kind in the exhibition en executed for erection at a residence at Wimbledon, and is g a special attraction to architects thers. Messrs. Soole's other ex- include a portion of an oak screen elliptical end (to be placed in the Hotel, Richmond); specimens of " doors made from some beautiful woods; a sample of Austrian oak panelling in which is hidden a secret panel; and various other examples of joinery. The whole of the stand was erected by Messrs. Soole and Son's own joiners, and with seasoned timber selected from their large stocks.

Address: Dunstable Works, Sheen Road, Richmond, Surrey.

THE DIAMOND TREAD CO., LTD.
Row J, Stand 181.

The Diamond Tread Co., Ltd., are exhibiting their steel section treads as supplied to H.M. War Office and Admiralty, also to The Underground and leading railways throughout the world; and their new "L" section treads in brass and aluminium framings. These treads are particularly adapted for restaurant steps, running boards of motors, 'busses, etc.

Address: 28 Victoria Street, London.

THE NORTH OF ENGLAND SCHOOL FURNISHING CO., LTD.
Row J, Stand 171.

A few of the many productions of this firm are shown, amongst them are the "Utod" patent doors of various types, suitable for hospitals, hotels, villas, cottages, etc. These doors are built up with two faces of plywood secured to a light core with a somewhat stronger rim. They have already been adopted in a number of the hospitals and for several housing schemes.

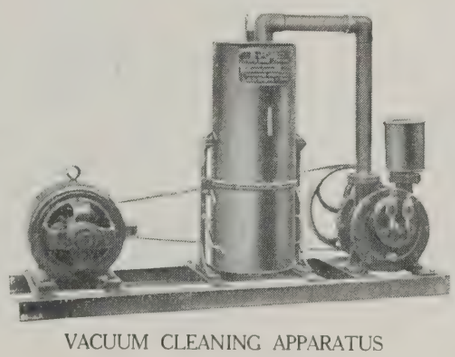
There are also the "Utod" patent windows which provide a simple but effective method of ventilating classrooms, and can also be applied to hospital and other purposes; the "Utod" patent lift-out partition; the Wilks' patent "climax" sliding partition; and w.c. seats and other specimens of the Company's manufactures. The stand itself is made, erected, and decorated by the Company.

Address: 2 Featherstone Buildings, High Holborn, London.

THE BRITISH VACUUM CLEANER, CO., LTD.
Row L, Stand 221.

Vacuum cleaners are shown of the positive and turbine type for all purposes as installed in many of the most important buildings, such as the Houses of Parliament, the G.P.O., Harrods, Waring and Gillows, Australia House, Offices of the Crown Agents for the Colonies, etc., etc. The firm are manufacturers of the B.V.C. pneumatic suction plant for removing boiler flue dust and ashes, also for conveying powders, etc.

Address: Parsons' Green Lane, Fulham, S.W.6.



VACUUM CLEANING APPARATUS

THE CONCRETE UTILITIES BUREAU.
Row F, Stand 110.

At this stand free literature on the manifold uses of concrete may be obtained, and the following volumes are on sale: "Concrete Cottages, Small Garages, and Farm Buildings," by Albert Lakeman, F.S.A., and "Concrete Roads," a recently published volume containing valuable data on the concrete roads of the United Kingdom and other countries.

Address: 35 Great St. Helens, London.

PRESSED BRICK MAKERS' ASSOCIATION, LTD.
Row F, Stand 119.

This stand is given over to an interesting display of the manufacture of the Fletton brick. The process is, briefly, to dig the clay by mechanical shovels, grind it to powder in a mill, thoroughly screen it, and then subject it to repeated pressures in a powerful machine from which it derives its great strength. Once made, the brick is placed straight away in a continuous type of kiln where it first receives the benefit of the hot air from bricks that are being cooled down, and is then gradually raised to a temperature of about 1,100 deg. to 1,300 deg., at which it becomes thoroughly vitrified. It is then allowed to cool down before being taken out and placed in trucks. At this stand of the Pressed Brick Makers' Association can be seen a set of miniature machinery by Messrs. C. Whitaker & Co., Ltd., of Accrington, showing a grinding pan and press in actual working, so that it is possible to see in operation the two most important features in the manufacture of the Fletton brick. Another prominent feature of this stand is the model building constructed throughout of Fletton bricks.

Address: 4 Southampton Row, Kingsway, London.

CUIRASS PRODUCTS, LTD.
Row L, Stand 29.

This firm is showing No. 6 Cuirass liquid proofing applied to felt, concrete, and corrugated iron roofs subject to a heavy downpour of water; also examples of Cuirass liquid proofing used on damp walls and porous bricks, displaying its exceptional damp-resisting qualities. On the same stand are also exhibited examples of Cuirass wood preservatives and stains, and Cuirass black enamel suitable for stoves, grates, and all domestic articles.

Address: 69 Victoria Street, London.

THE LIMMER AND TRINIDAD LAKE ASPHALT CO., LTD.
Row B, Stand 22.

This firm is exhibiting specimens of mineral rock asphalt as taken from the company's freehold mines, Bassin de Sevssel (Haute Savoie), France; mineral rock mastic asphalts; "Lithocrete" asphalt for factory floors, loading platforms, etc.; Trinidad Lake bitumen for use for various industrial purposes; Lithofalt paving blocks in various thicknesses; Trinidad asphalt-macadam taken from various carriageways; compressible rock asphalt paving taken from various carriageways; "Bitmarin" bituminous specialities, including paints and damp-

proofing composition; asphalt in various forms as laid; Bitma joint box compounds, and Hutchinson's testing apparatus and instruments for standardizing bituminous road materials, etc.

Address: 34 Victoria Street, London.

MESSRS. MOORWOODS, LTD.
Row B, Stand 14.

Messrs. Morwoods, Ltd., manufacturers of grates, ranges, and every description of cooking apparatus for gas, steam, coal, and electricity, ships' cooking apparatus, heating stoves, calorifiers, and general castings, are showing a new combination grate, giving sitting-room grate with oven and hot closet, and powerful boiler for hot water for cylinder shown working; a selection of mantel grates, portable range, and portable boiler suitable for housing schemes; the "Regal" range shown in 4 ft. 6 in. size; fireplace suites in Georgian and Jacobean styles; a selection of up-to-date interiors suitable for tile surrounds in various periods; new pattern adjustable fire parts; and a steam calorifier capable of heating 500 gallons of water per hour from 50 deg. Fah. to 180 deg. Fah., with steam at 50 lb. pressure.

Address: 14 Richeley Street, Belvedere Road, London.

THE WATEREX COMPANY, LTD.
Gallery, Bay 15.

Waterex waterproofing exhibited on this stand is a liquid waterproofing which has been used with marked success on all types of buildings for the last fourteen years. Chief features of the exhibit are waterproofed brick and breeze block walls and waterproofed and oil-proofed tank made of breeze blocks; loose sand treated with Waterex waterproofing—with water standing in a depression—demonstrating that Waterex waterproofing stops suction and capillary attraction. Waterex floor preservative and Waterex pumps for handling water, paint, heavy crude fuel oil, syrups, hot tar, etc., are also shown. The stand is covered with Magbestic jointless flooring laid by the British Magnesite Flooring Company, City House, 158–60 City Road, E.C. 1.

Address: 104 High Holborn, London, W.C.1.

THE XELITE PLASTER CO., LTD.
Row D, Stand 62.

At this exhibit the application of Xelstone on external work is shown. It is a stone finish worked in situ, and can be applied to new or old brickwork. Several of the old brick buildings in London have been given an application of Xelstone. It has also been very extensively used as a facing on reinforced concrete work. This firm is also showing its Xelite plaster used on the interior of buildings.

Address: 56 Buckingham Gate, London.

T. B. COLMAN AND SONS, LTD.
Row E, Stand 90.

Messrs. T. B. Colman and Sons, Ltd., are exhibiting two of their patent revolving doors, so erected as to enable visitors to test the actual working under conditions that would exactly apply if such doors were installed in commercial offices, hotels, or other premises. The revolving wings collapse, either to the centre, or right over to one side. Two types of revolving doors are on show: one is the ordinary collapsible four-way door, but with an entirely new fitting. This fitting considerably facilitates the collapsing of the door, as by an instantaneous action the wings come to a central position. Hitherto two operations have been necessary to bring this about. The other is their automatic panic collapsible four-way door, which meets all the regulations of the L.C.C. and other fire authorities. These doors are particularly suitable for theatres, cinemas, and other public buildings. So delicately are they adjusted that as soon as an increased pressure in excess of that required for the usual entrance and exit is applied the wings automatically collapse and give a clear opening.

Address: 53–56 King Street, Brighton.

CHANGEABLE SIGN CO., LTD.
Row B, Stand 6.

The Unit system of directory boards for large buildings are rapidly coming into general use. Unit system signs have been installed in, among others, Australia House, Cunard Building, British Columbia House, Norway House, British Glass Industries Building, and Gracechurch Buildings. They may be inspected at the firm's stand.

Address: 182A Shirland Road, London.

WADKIN & Co.
Row K, Stand 198.

Wadkin & Co. make a feature of a simple machine suitable for a great variety of woodwork of the lighter kinds, such as drilling, recessing, shaping, working inside or outside edges of straight, circular, or irregular mouldings, chamfering, grooving, cutting housings, string boards for stairs, panel raising, slot mortising, etc. The main frame of the machine consists of a heavy hollow standard carrying a high-speed belt-driven spindle. The distance from the centre of the spindle to the frame is 18 in., and the maximum distance from the chuck to the table is 13 in. Holes up to 4½ in. diameter and 11½ in. diameter can be bored right through the solid. The table of the machine measures 28 in. by 15 in., and has movements in both directions. A rack and pinion gear gives a longitudinal travel of 22 in., while the transverse travel of 15 is effected by means of a screw and hand-wheel. The table top is provided with tapped holes for fixing fences and clamps, and the table itself can be raised or lowered 6½ in. by means of the large screw and hand-wheel beneath it.

Address: North Evington, Leicester.

INTERLOC CONSTRUCTIONS C
Row C, Stand 45.

Charming little models of houses built on the Interloc system are exhibited on the company's stand. They show that the modern is by no means necessarily the hideous, and that as delightful results can be produced with the newest system of construction as with the methods of our ancestors. The Interloc cellular brick system was approved by the Ministry of Health in 1919, and since then has come into use in various parts of the country. The salient features of the system, which is the invention of Mr. George E. Clare, M.S.A., are, it is claimed, simplicity and speed in erection, strength, insulation, adaptability, and economy. The units of which it is composed are dovetailed for greater strength, and may be left smooth for finished work, or rough to receive plaster or rough-cast.

Address: Metro. Stations Approach, Harrow-on-the-Hill.

STAND OF MESSRS. G. A. HARVEY & CO., LTD

Colour Experiments in a Liverpool Housing Scheme.

It is doubtful whether any town in the United Kingdom has displayed more enterprise in its housing policy than Liverpool. The end of the war found Liverpool faced with a shortage of something like 15,000 houses, besides the really urgent need of dealing with unhealthy and congested areas in the heart of the city. The housing committee's pioneer work in both connections is known far and wide, so that Liverpool has come to be regarded as a sort of nursery of new ideas in building. By the end of last year over 2,000 houses were in occupation on the various estates, in addition to nearly 500 wooden huts converted into bungalows, chiefly for ex-soldier families.

Mr. F. E. G. Badger, Assoc.M.Inst.C.E., who was appointed Director of Housing for Liverpool in the summer of 1919, firmly believes that if we could do away with the sordid monotony of most of our industrial dwellings it would help considerably towards dispelling the spirit of depression and unrest which animates the working classes at the present day. He has accordingly experimented with various colour schemes for the new Liverpool houses, adapting the "Winget" pressure machine to his purpose. On the Derry Lane estate, which is being developed by the Corporation with direct labour, he is building houses of an entirely new appearance. There are blocks of twos and fours and eights in harmonious shades of silver-grey, buttercup-yellow, blue and red, etc., with string courses picked out in black and other colours, according to the general scheme of decoration. A plinth course in black is particularly effective. Quoins of a different shade add a further touch of colour in the external angles, under bay windows, and entrance doors.

COLOURED CONCRETE BLOCK HOUSES AT LIVERPOOL

The general result is to confirm the theory that brightness can be introduced into our cottage building with considerable advantage. Here is a field of far-reaching possibilities for the architect. It is of the first importance in adopting this idea that control be left

PAIR OF COLOURED CONCRETE BLOCK HOUSES AT LIVERPOOL. F. E. G. BADGER, ASSOC.M.INST.C.E., ARCHITECT.

in the hands of qualified architects. Properly handled, most charming results can be obtained by the grouping of the colour blocks, so that all the old objections against the use of concrete blocks on the score of monotony of appearance fall to the ground. Nor is it to be imagined that the use of coloured blocks is limited to the building of cottages. There is undoubtedly a big future for them in other directions as well.

Mr. Badger decided two years ago in favour of concrete blocks, which lend themselves readily to his ideas of town planning and colour treatment. One of his ideals—and a very admirable one is that the backs of houses should be as acceptable in appearance as the fronts. "It is utterly impossible," he argues, "to obtain a satisfactory treatment with back streets, yard walls, and ugly projections in the rear, no matter what material is used in them." Hence he advocates the open method of estate development, where every house is provided with a garden, one of the conditions of tenancy being that the occupier shall cultivate the land.

One advantage of coloured concrete blocks is that though no two houses built on this system are exactly alike they blend together remarkably well. The colour is incorporated with the facing material, while the block is being manufactured in the pressure machine, and the face stippled afterwards by hand to secure variety in surface texture. Houses which have already weathered two winters on the Cherry Lane site at Liverpool testify to the durability of the colouring. Equally interesting are some of the interior effects secured in the same houses.

Faced with a serious shortage of plasterers, Mr. Badger has used sand-faced concrete blocks, made on the same type of pressure machine as before, for the interior walls. These form an even face upon which the wall-paper is pasted. In some of the later houses wall-paper as well as plaster is being largely dispensed with. Internal walls are being built in these cases with a dado of any desired colour—red, for instance, with grey or cream - coloured blocks above. These may be left without further treatment, or sized and varnished. The economy and rapidity of construction thus secured form by no means the least satisfactory feature of these striking experiments at Liverpool.

American Architecture

American architecture formed the subject of an interesting lecture delivered by Mr. Robert Atkinson, F.R.I.B.A., to the Architectural Association of Ireland. Architecture was so complicated, said the lecturer, that architects could not be considered architects in the proper sense, since one had to specialize thoroughly in a particular branch, as in America. So advanced was American architecture that no work was undertaken for public bodies without consultation, the result being that the work accomplished reached a very high standard, and public confidence was developed and sustained. An entirely American school of architecture had now been developed. The lecturer commented on the care bestowed on old buildings in America, an example which he thought might be followed in Dublin, where old buildings might be restored to perfect condition with an outlay of a couple of hundred pounds. The first school of architecture had been started in Chicago by an Irishman named Sullivan.

New Inventions

Latest Patent Applications.

9787.—Baines, J. S.—Method of bu ing construction. April 5.
9975.—Baumgarten, R. H.—Mould manufacture of blocks, etc., artificial stone mixtures, April 7.
9810.—Hinkins, H. — Machines manufacture of concrete, e building blocks. April 5.
9951.—Lowry, S. S.—Building c struction. April 7.
10045.—Lynn, A.—Method of form ceilings. April 8.
9206.—Bavegem, E.—Concrete girde floors, plates, panels, March 30.
9429.—Harrison, C. — Cutting a moulding stone, marble, April 1.
9059.—Knapman, E. G.—Scaffoldi March 29.

Specifications Published.

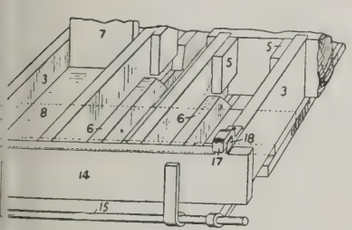
155268.—Polla, A.—Process for the ma facture of building materi with ligneous fragments.
176961.—Garthwaite, F. — Walls building.
177051.—Frewen, E. J.—Buildings a building-blocks thereof.
172921.—Andre, H.—Theatre stages.
177229.—Wilkie, W. — Apparatus moulding concrete blocks a slabs for building houses a walls and other structures.
177350.—Hamilton, H. A.—System building walls.
177212.—Hojgaard, K. N.—Manufacti of concrete slabs applicable the building of walls, partitio floors, roofs, and the like

GROUP OF COLOURED CONCRETE BLOCK HOUSES AT LIVERPOOL.
F. E. G. BADGER, ASSOC.M.INST.C.E., ARCHITECT.

houses and other erections or structures.

Abstracts Published.

25.—Moulds.—Green, W., 14 Fielding Road, Hammersmith, and Dean, J. H., Waldene, Sittingbourne, Kent.—A mould for concrete slabs, etc., comprises fixed side-walls 3, a hinged front wall 14, and a slidable L-shaped palette which forms the bottom and back of the mould and consists of two parts 7, 8 joined by angle-irons. A number of moulds may be arranged as shown in single or double rows in a frame, in which case a single front plate 14 is used for the whole series, being held in position by a projection 18 engaging a catch 17, and opened by an initial transverse sliding movement followed by a rotation about the axis 15. Runners 6 and stops 5 guide the palettes, which are adjustable in height by fillets placed on the runners and are preferably provided with removable bottom boards. The moulds may be further divided by a series of partitions adapted to rest on the palette 8, and the material therein is compressed by a travelling press which moves on rails so as to register with the moulds in succession. Specification 4187/05 is referred to.



8.—Roofing, walls.—Webster, T.K., 138 North La Salle Street, Chicago, U.S.A., and John, W. E., 13 Marlborough Road, Richmond, Surrey.—Reinforcing-material such as wire netting or expanded metal is embedded in a fibrous asphaltic composition consisting of paper or other fibres, hard pitchy asphalt non-liquefiable by heat, and a residuum oil. Plain or corrugated sheets of the reinforced material are used as roofing, walling, etc. Specification 8815/15 is referred to.

bove particulars are specially prepared by Rayner & Co., Registered Patent Agents, of ery Lane, London, from whom readers of this may obtain all information free relating to trade-marks, and designs. Messrs, Rayner & Co. in printed copies of the published specifications ard on post free for the official price of 1/- each.

ublications Received

e Property Owners' Handbook." ed and edited by M. Cheverton- President of the Hull and District ty Owners' Protection Association, and Secretary of the National tion of Property Owners and Rate- Price 5s. net. A. Brown and td., 5 Farringdon Avenue, E.C.4.

Royal Scottish Academy

In the Exhibition of the Royal Scottish Academy for this year, now open in Edinburgh, there is an interesting display of architectural works. War memorials are prominent, but other drawings include various important buildings.

The design is hung of the Bank of Chile, Santiago, by Sir Aston Webb, P.R.A., A.R.S.A. Another drawing arresting attention is the proposed shrine for the Bahai Community, Allahabad, India, by Mr. Frank C. Mears, who has also on view a design for the University of Jerusalem.

Mr. David A. Beveridge, L.R.I.B.A., displays his plans of the Hydro-electric Power House for the Erne scheme. The extension to the business premises of Messrs. Pettigrew and Stephens, in Bath Street, Glasgow, is seen in the plans of Messrs. John Keppie and Henderson, and additions to Belford House, Belford Park, Edinburgh, are shown by Mr. James McLachlan.

Views of the Monastery du Carmel are from designs by the late Mr. Ernest Newton, R.A. and Mr. W. Nicholls. Another design by Mr. David A. Beveridge is the proposed hydro-electric power house at Aswan Dam, Egypt. Plans are shown of the Guildford Grammar School, West Australia, by Mr. Walter Tapper. Messrs. Stewart and Paterson have plans of St. George Co-operative Society, Ltd., warehouse, and Mr. Louis de Soissons, A.R.I.B.A., sketches of the proposed factory at Welwyn garden city. There is also an interior of a fish shop, in Old Bond Street, London, by Mr. Leslie Mansfield, F.R.I.B.A., and the mortuary at Victoria Infirmary, Glasgow, is from plans by Messrs. H. E. Clifford and Lunan.

Mr. Frank Ed. B. Blanc is exhibiting the proposed new dining-room for the Marine Hotel, at the East Lothian golf resort, Gullane. Designs of proposed tenements, Borough of Hammersmith, southern area, are by Messrs. Henry T. Hare and Bertram Lisle, London.

There is a very interesting collection of plans and drawings by the late Sir R. Rowand Anderson, A.R.S.A., LL.D. These include Edinburgh University, Dunblane Cathedral as restored, Scottish National Portrait Gallery, Sir William Pearce Memorial Institute, and Greenock Parish Church.

Many sketches and drawings of war memorials are on view. Mr. Harold O. Tarbolton, F.R.I.B.A., has a memorial chapel at St. Paul's Episcopal Church, Edinburgh, an oak screen at St. John's Episcopal Church, Greenock, and photographs of the model of the Paisley war memorial, which obtained the third premium. Sir Robert Lorimer, A.R.A., R.S.A., shows a sketch design for a naval memorial. He has also a bronze group illustrating his first premiated design for Paisley war memorial. Another memorial by Sir Robert Lorimer is that for Queenstown, South Africa. Mr. James A. Morris, A.R.S.A., has designs of Ballantrae Parish Church War Memorial and the Burgh of Prestwick memorial.

Original sketch designs and photographs of executed work are displayed of Corstorphine Parish Church War Memorial. The work is in Ravelston stone, selected by the architect, Mr. William Davidson.

On the Island of Inchkeith, a fortified island in the Firth of Forth, is to be placed the memorial to the late Lord Herbert of Lea, and that and two other memorials are shown by Mr. John Kinross, R.S.A. Mr. Alexander N. Paterson, A.R.S.A., F.R.I.B.A., has designs of war memorial crosses for Yarrow, Ancoum, and Shandon. Mr. D. McKay Stoddart, of A. N. Paterson and Stoddart, has on view his design for the High School War Memorial, Glasgow, and that for the Stevenson Church. Messrs. Begg and Lorne Campbell show a model—Love disarming War—of their competitive design for Paisley War Memorial.

Mr. William Davidson, architect, has on view eleven photographs of war memorials in stone, bronze, enamels, and oak; and Mr. James B. Dunn, A.R.S.A., is represented by two tentative designs for a memorial, also views of Lockerbie and George Heriot's School War Memorials. The design for the R.I.B.A. memorial of Mr. D. McKay Stoddart is hung; and Mr. Reginald Fairlie shows plans of St. Andrew's Church and House, Rothesay. Messrs. A. Marshall Mackenzie, R.S.A., LL.D., and A. G. R. Mackenzie, show their Nairn County War Memorial; Messrs. Begg and Lorne Campbell war memorials in Scottish oak for three churches, as well as the Lady Rowand Anderson memorial cottage, Colinton; and Mr. E. Vincent Harris a view of the Queen Mary Maternity Home, at Hampstead.

Designs for stained glass windows include those sent by Messrs. Joseph E. Nuttgens, John Charles Bewsey, Wm. Meikle and Sons, Glasgow, James S. Hamilton, Robert Camm, Martin Travers, Eve Loach, and Rachel Tancock.

Architects' & Surveyors' Assistants' Professional Union

The next of the series of meetings organized by the Executive Council of the Architects' and Surveyors' Assistants' Professional Union will be held to-morrow (Thursday) at Caxton Hall (Room 13), Westminster, S.W.1, at 6.30 p.m. The subject for discussion is "Economic Conditions after the Present Slump," to be opened by Mr. Alfred Lugg, gen. sec. of the Actors' Association. Mr. Geo. Lathan, President of the National Federation of P.T.A. & S.W., will occupy the chair. These meetings are organized for the purpose of recruiting the Union, of stimulating the interest of members in professional and economic questions which vitally affect them, and to enable the members of the executive to be in close touch with the views of those whom they represent.

Coming Events

Thursday, April 27.

The Concrete Institute: "Reinforced Concrete Piers and Marine Works," by Mr. W. Noble Twelvetrees, M.I.Mech.E., etc. 7.30 p.m.

Saturday, April 29.

R.I.B.A. visit to Somerset House. 3 p.m.

Monday, May 1.

Architectural Association: Exhibition of photos by Mr. F. R. Yerbury.

Architects' Reception and Dinner at Olympia

Olympia, last Friday, was given over to sociability, a reception being followed by a dinner, this in its turn preparing for the revels of the night.

Music, tea, and talk were pleasant accompaniments to the gathering of architects which took place in the afternoon, under the auspices of the Architects' Welcome Club. The guests were received by the respective Presidents of the R.I.B.A. and of the Society of Architects, and many distinguished members of both bodies were present.

The Welcome Club exercised yet more hospitality in the evening when under the chairmanship of Mr. Paul Waterhouse, P.R.I.B.A., a large number of guests representing the various constituents of the building world enjoyed dinner, music, and witty speeches. Among those present were Sir Lawrence and Lady Weaver, Major Harry Barnes, M.P., Mr. J. W. Lorden, M.P., Mr. Chessum, Mr. Beal, and Mr. Fiander Etchells.

Mr. Greville Montgomery proposed the toast of "Architecture and the Building Industry," and paid glowing tribute to the "niceness, beauty, and brilliance" of Mr. Waterhouse, president of the Exhibition, and, incidentally, of the R.I.B.A.

Mr. Waterhouse, in reply, remarked that after-dinner speeches were a terrible business, and then proceeded to delight his hearers by the dexterous exercise of his singularly pretty wit. He was, he said, proud to represent architecture. How he attained to his present position his audience didn't know and he didn't tell, but he was proud to be there, particularly at a gathering which included so many members of the building industry. The callings of the architect and the builder were closely knit together, and more and more as years went on they got to know each other better, and that common understanding was the truest basis for good fellowship and good work. These were times of hope, and the Building Exhibition was a sign of hope for both the architect and the builder. In conclusion, he cordially welcomed M. Augustin Rey, of the Société Centrale des Architectes Français, and trusted that M. Rey would convey to his organization the fraternal greetings of British architects.

Mr. A. J. Forsdike, past-president of the National Federation of Building Trades Employers, who also responded, said that the interests of the architect and of the builder were so intermingled that the best of relationships should always exist between them. He believed that if they all put their shoulders to the wheel the building industry would regain its former position.

Mr. Edwin J. Sadgrove, president of the Society of Architects, proposed "The Guests." M. Augustin Rey, replying, said that happiness was born of sincerity, and the architect must above all be sincere. The architect was no politician; he did not build in the clouds, but was in fact a veritable recorder of history. Under the influence of time many things might pass away, but some work of the architect remained, some monument, some public building, or perhaps a church. The architect in truth played a great social part, and his responsibilities were great. It was his duty to design homes in which families could find comfort and happiness. Great Britain, continued M. Rey, had done admirable and courageous work in attacking the housing problem. Slum areas had been reconstructed, and gigantic improvements made which were a revelation. As time went on they watched the city penetrating into the country and the country penetrating into the city.

Sir Lawrence Weaver also replied.

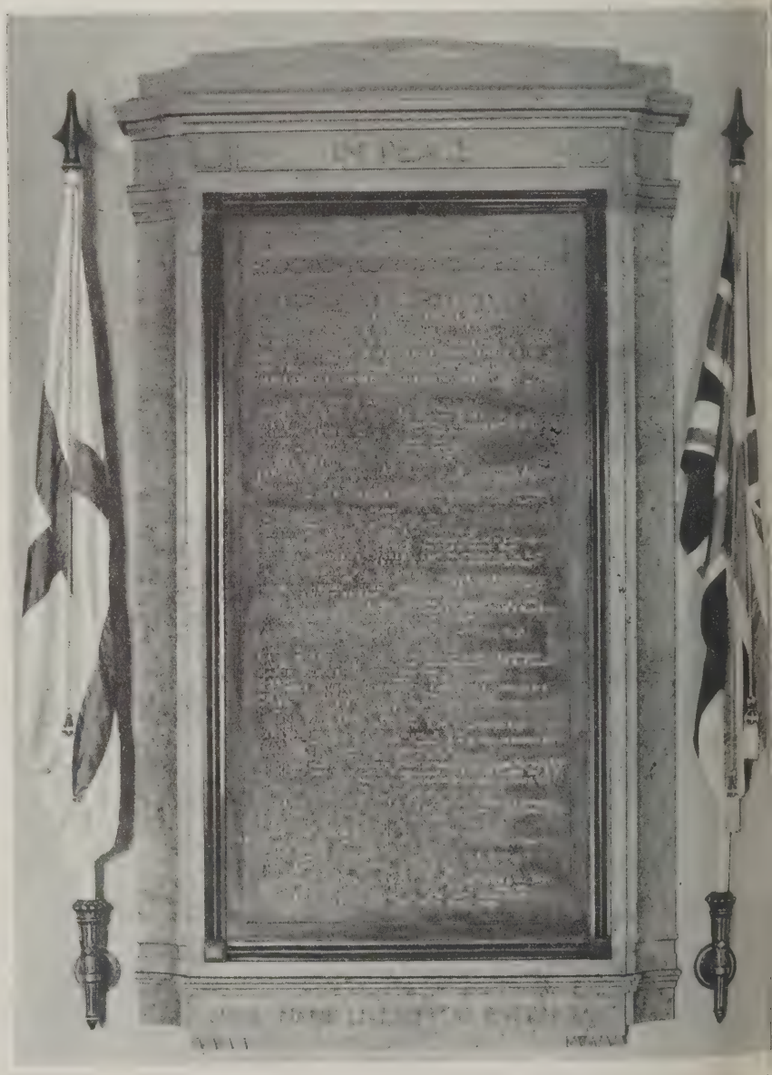
The New Olympia

The contract for the construction of the new hall at Olympia has been given to Messrs. P. and W. Anderson, Ltd., of Glasgow and London. The work is to be commenced forthwith, and efforts are to be made to have it completed by the autumn. The expenditure is estimated at approximately £150,000. In addition to having a floor space capable of accommodating 8,000 people, the new hall will also contain additional restaurants. The larger and smaller halls will be so arranged that either can be used for separate exhibitions.

The extensions will consist in the main part of a new rectangular hall, 265 ft. by 175 ft., built between the existing b ing and Hammersmith Road, and nected to the main building by a pas 95 ft. broad and 97 ft. long. The n entrance to Olympia will be via the hall from the Hammersmith Road fi

Memorial Tablet at Port head

This memorial tablet has been ere from the designs of Mr. C. F. W. Der F.R.I.B.A., R.W.A., on the north int wall of the parish church at Portish The tablet is 7 ft. by 3 ft. 9 in., ar constructed of Hopton Wood stone, a slip of black Belgian marble, the br plate being finished a dull green and letters burnished. The flag-holders spearheads are also in bronze, and flags are of silk with cords and ta in gold tinsel. The lettering in the H ton Wood is incised. The tablet about £300. Mr. Dening has rece designed a lead-lined shelf just below base for flowers and wreaths. The ma work was executed by Mr. Wood College Green, Bristol; the bronze v by Humphrys Oakes, 109 Lawrence Bristol; and the fixing was done by W. E. Carey, of Slade Road, Portishe



WAR MEMORIAL TABLET AT PORTISHEAD.
C. F. W. DENING, F.R.I.B.A., R.W.A., ARCHITECT.

The Week's News

War Memorial Cottages.

ottages built at Hampton-on-Thames
u war memorial have now been com-
ed.

New Super-Cinema for London.

new super-cinema is to be erected
u site in Regent Street from the designs
Ir. Robert Atkinson, F.R.I.B.A.

New Hotel for Derby.

he Officers' Brewery Company are
ut to erect an up-to-date hotel in the
ket Place, Derby.

£2,000,000 Dock Scheme.

scheme has been prepared for the de-
opment of Workington Dock, Cumber-
l. It will cost from two to two-and-a-
millions.

Talbot Woods, Bournemouth.

large part of Bournemouth's pleasure
rt, Talbot Woods, has been sold by
tion, local builders buying nearly
en acres for £17,840.

Littlehampton Sea Defence Works.

he U.D.C. are applying for Govern-
lt assistance to repair or renew the
r and sea defence works. Permanent
ks are estimated at about £50,000.

New Cinema for Paisley.

new picture house, to seat 1,500, is
g erected at the corner of Neilston
d and Orr Street, Paisley. The
itects are Messrs. Gardner and Glen,
Bath Street, Glasgow.

Woking Hospital Extension Scheme.

Woking Cottage Hospital Committee are considering a comprehensive scheme put forward by the General Purposes Committee for the extension of the Woking Victoria Cottage Hospital buildings.

Spitalfields Market.

The Corporation of London is now seeking powers to carry out improvements at Spitalfields Market for which they require to borrow £2,000,000. The accommodation of the market itself is to be practically doubled.

New Houses for Sandhills.

Plans have been passed by the Glasgow Corporation for the erection of 200 houses at Sandhills. These houses will have either three, four, or five apartments, with scullery and bathroom. Half of the houses will be of brick, and the others of concrete blocks.

Central Hot Water for Glasgow.

Glasgow Corporation have decided to install central hot water at the Craigton Housing scheme. It is to be used in connection with ninety tenement houses, and will give a daily supply of twenty-five gallons to each house at a cost to the tenant of not more than 2s. per week.

Edinburgh Hall.

Definite steps have been taken for the erection of an exhibition hall on a scale large enough to house the biggest trade exhibitions. A fairly central site has been obtained by the Edinburgh Exhibition Association, the promoters of the scheme. It is hoped that the hall will be completed by October.

A Correction.

In the advertisement of Messrs. Chas. P. Kinnell & Co., Ltd., in our issue for April 12, we inadvertently published the name of the architect incorrectly for Messrs. Bryce and Weston's new building at Londonderry. The name of the architect should have been given as Mr. P. J. Westwood, A.R.I.B.A.

Technical School for Chesterfield.

In view of the serious lack of suitable accommodation for technical education in Chesterfield and district, and consequent on the gift of Ald. Eastwood of a site and £25,000, the Derbyshire County Council has decided to proceed at once with the erection of certain portions of the building which will lend themselves to incorporation in the complete plans.

Denmark and Electric Power.

For some time past there has been under consideration the question of transmitting electric power from Norway to Denmark. A technical committee has been appointed by the Norwegian Government, while the Danish Government have also appointed a committee for the purpose of considering the practicability of putting a scheme into operation.

Edinburgh A.A. New Officers.

The Edinburgh Architectural Association have appointed the following office-bearers for the ensuing session: Messrs. T. Aikman Swan, A.R.I.B.A. (President), T. P. Marwick, A.R.I.B.A. (past president), J. Inch Morrison, L.R.I.B.A., and F. C. Meara (vice-presidents), Stewart Kaye, A.R.I.B.A. (hon. secretary), James A. Arnott, F.R.I.B.A. (hon. librarian), and W. G. Walker, C.A. (hon. treasurer).

A COTTAGE HOSPITAL. ALFRED J. DUNN, F.R.I.B.A., ARCHITECT.

Restoration of Durham Cathedral.

The scheme for the restoration of the lantern tower of Durham Cathedral, which was projected before the war, is now being put into operation. Work involving an expenditure of £10,000 has been contracted for, and this will form a beginning. But operations which will ultimately cost at least £50,000, probably more, are, in the opinion of the Dean (Bishop Welldon), needed in the next few years before all that is requisite thoroughly to restore this magnificent pile and the buildings in the precincts can be said to have been carried out.

London School of Hygiene.

Questions regarding the selection of a site for the new school of hygiene to be erected in London are still under consideration by the committee appointed by the Ministry of Health. The Rockfeller trustees generously offered a sum of $2,000,000 towards the cost of building and equipping the school on the understanding that the British Government accepted the responsibility of providing for staffing and maintaining the school when established. The Ministry of Health gratefully accepted the offer on behalf of the Government.

Glasgow's War Memorial.

Sir John J. Burnet's design for a war memorial cenotaph to be erected in front of the main entrance to the Municipal Buildings, Glasgow, has been accepted by a majority of the Executive Committee. The Town Council will have the subject before them at the next meeting. The cenotaph rises from an open vault 7 ft. below the level of the square, and is severe and simple in its lines. It carries on the upper part of the western face a gilt sword used as a cross, and on the lower part the city arms. A bronze railing surrounds the vault.

Royal Wedding Plaint.

The London Society states in its journal that complaints have reached it from several quarters as to the decorations in the neighbourhood of Westminster Abbey on the occasion of the wedding of Princess Mary. In addition, the R.I.B.A. has asked the Society to co-operate in making a protest to the authorities responsible. The Society has asked that the matter should be discussed by representatives of the Society, and the members of the Art Committee of the R.I.B.A. "We think," the Society adds, "that we shall be able to make some suggestions that would prove acceptable to the councils of both bodies and would assist in the attainment of better results in the future."

Saxon City Church.

On the site of some demolished buildings on the south side of St. Helen's Place in Bishopsgate Street, the foundations of an old Saxon church, and even of an earlier building, thought to be Roman, have been revealed. The excavations have also exposed portions of the walls of St. Helen's Church, formerly part of a great Benedictine nunnery founded in the thirteenth century, which have been shut in for many years. It has been arranged that whatever structure is erected there a private alley or passage will be left which will admit of the north-eastern wall being seen by antiquaries and archæologists in all its ancient beauty.

Huts in the Parks.

The process of demolishing Government huts in London parks and gardens is progressing with all possible rapidity, and excellent results have been attained during the past few months. In some places a complete clearance has been effected. This is the case, for instance, along the Victoria Embankment Gardens. All the temporary buildings there, as far as Horse Guards Avenue, have been removed. In St. James's Park the work of demolition proceeds apace. So far as Regent's Park is concerned the Government hutments are likely to be seen there for some time to come, in the shape of the Aircraft Disposals Depot. The hutments at Victoria Tower have all been cleared away.

English Renaissance Woodwork

It is strange that until now there ... been no book dealing adequately with ... fascinating subject of English Ren... sance woodwork. Mr. Thomas ... Beveridge has been fortunate in find... untilled so rich a field, and he has worl... in it with conspicuous success. His ma... measured drawings, which will be fou... of inestimable value by the designer a... executor of decorative woodwork, w... made in the colleges of Oxford and Ca... bridge, in the State apartments ... Hampton Court Palace, and in St. Pa... Cathedral; that is to say, he ... selected the best examples of the m... flourishing period for decorative wo... work, the period of Wren the peerl... architect, and of his henchman Grinl... Gibbons the prince of wood-carv... Being an architect, Mr. Beveridge d... not strive for purely pictorial effect ... the manner of the mere lay artist; b... while abating no jot of the beauty ... the work, he treats it in a manner t... the architect will most esteem—w... accuracy of measurement, and with... either exaggeration or suppression ... detail. The book (or portfolio, for it... available in either form) is the fruit ... consummate skill in draughtsmansh... and of the patient and devoted labour ... several years. The eighty large plates ... which the work consists show the co... plete capacity of the art of the wo... carver at its zenith, and the examp... are not only beautiful in themselv... and hence "a joy for ever," but sup... an abundance of motifs of which ... architect and the decorator will be g... to avail themselves for the enrichm... of interiors.

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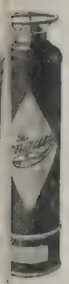

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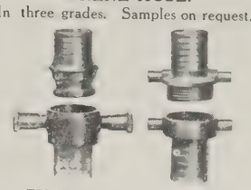

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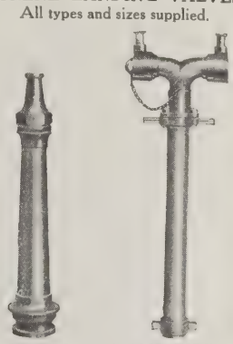

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Architect as Craftsman

Why should the architect confine himself strictly to the designing of buildings? His special training and the peculiar nature of his work render his advice invaluable on all matters in which æsthetics and construction are concerned. A case in point is that of Mr. Maurice S. R. Adams, A.R.I.B.A., who has now devoted himself to the designing and making of furniture on traditional lines. Some typical examples of his work are illustrated on this page. In his earlier days Mr. Adams received instruction in cabinet making, and at the beginning of his new career was able to execute all the work himself. The success achieved by Mr. Adams should be an object lesson to the manufacturer. In the past, circumstances have compelled the architect to confine his attention mostly to building and decorative work. Manufacturers should realize that there are a hundred and one articles of everyday use upon which the advice of an architect should be secured.

The bedstead is a delightfully simple piece of work, the carved corner terminals giving a quaint touch of character. The dresser is also a charming piece, combining elegance with utility. Several people have had the lower part for a sideboard. The upper part is so made as to allow of a dado top rail to pass, and also to bring the back right up flush with the wall. The leg projection is also allowed for.

BEDSTEAD DESIGNED AND MADE BY MAURICE S. R. ADAMS, A.R.I.B.A.

DRESSER DESIGNED AND MADE BY MAURICE S. R. ADAMS, A.R.I.B.A.

Guide to Sutton Park

An extremely interesting and co guide to Sutton Park has just published by the Birmingham Society in conjunction with Messrs. nish Bros., Ltd., of Birmingham. V some from photographs by Mr. A McKewan, A.R.I.B.A., are given o most delightful features of the p together with historical and other by various writers. The contrib include George Sidwell (description, tory, and legends), W. H. Foxall, F.R (geology and physical features), W Bloomer, F.L.S. (vegetation), W. Grove, M.A. (lichens, mosses, and worts), Jessie S. Bayliss Elliott, (fungi), W. A. Wilkinson, F.L.S., F. M.B.O.U. (animals and birds), J. S Elliott (reptiles, amphibians, and fis H. Foster Newey (insect life), H. Ov (snails and slugs), and A. Leal, L. (pond life). There is also a picture indicating the extent of the park, illustrating in an interesting manne association with the past from the of the early Britons and the Romans is pleasant to remember that Shakesp knew Sutton. When he visited his folk at Park Hall he must have s made a pilgrimage to the song-insp wilds of Sutton, and there, perh gained some inspiration for the woo scenes of "A Midsummer Night's Dre Anyhow, he honours the town by ciating it with the recruiting activiti Sir John Falstaff, who exclaim Bardolph: "Get thee before to Cove fill me a bottle of sack; our soldiers march through: We'll to Sutton Col to-night." "The Guide" (price 1s net) should serve as a valuable reco the Park's wide and varied interests.

nesday, May 3, 1922. Vol. LV. No. 1426

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

AN ALTAR TREATMENT.
BY G. GILBERT SCOTT, R.A.

27-29 Tothill Street, Westminster, S.W.1.

Current Architecture. 156.—New Buildings in Fountain Court for the National Provincial and Union Bank of England

Paul Waterhouse, P R.I.B.A., Architect

The original from which the above reproduction is taken appears in the Architectural Room of the Royal Academy, and is the only work by which the President of the Institute is represented this year. It is a characteristic piece of design, effectively displaying Mr. Waterhouse's peculiar ability for getting a striking elevational effect on an awkward site.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

dnesday, May 3, 1922

Volume LV. No. 1426

The R.I.B.A. Elections

THE preliminary list of candidates for the Council and Standing Committees of the R.I.B.A. is in the hands of the members, and they have only themselves to thank if they do not obtain the esentation they desire. Those who have acted as tineers in past elections have been surprised at the ively small number of the voters. It is probably e within the mark to say that not more than a ter of the members ever take the trouble to record vote.

he reason for this apathy is difficult to understand, an hy that is shown not only by the voting, but by the dance at the public meetings and at the various onal papers. It would be thought that even those bers who take the somewhat narrow view that the tute is nothing but a trade union would desire that ould be run on efficient lines—and no institute or ty can be run efficiently if the majority of its members ndifferent or careless of its welfare. With the best n the world the executive can only arrange and direct; not dragoon the rank and file into action, even when action is necessary for the immediate good of the pro-n.

several occasions during the past session, when such y important subjects as Registration and the condi- of employment of architects on the Government ng schemes have been before specially convened al meetings, there has been a question as to whether ecessary numbers of Fellows and Associates have present to form a quorum! It would seem to e fate of all important societies, as with most other n institutions, to pass through clearly marked stages thusiastic growth, powerful prime, and then slow .

n Addington Symonds tells us that there was once iety of artists that dominated all Italy; it had its hes in every town of any size throughout the length readth of the peninsula, and exercised a despotic on artists and patrons alike.

the heyday of its prime it was alive, active, and en-stic, but gradually the mass of its members ceased ke any interest in the executive, and its influence waned until it became an almost forgotten name. if all is well with the R.I.B.A., why are not its meetings nly attended as those of such comparatively youthful ies as the Art Workers Guild or the Town Planning tute?

en we consider the many important questions that architects and architecture at the present time it is lt to believe that the R.I.B.A. has had its day and o longer an important purpose to serve. Registra- and Unification, education, official architects and l architecture, the future of housing and town plan- are some only of the vital issues on which architects should, through their corporate societies, express themselves, and so influence political and public opinion.

At various periods in the immediate past it might with truth have been said that the executive of the Institute tended to represent the purely professional and conservative elements of the profession, that it was an eminently respectable, cautious, staid collection of reputable middle-aged gentlemen whose one concern was to keep on friendly terms with the Royal Academy, and to do nothing that might conceivably excite any interest in the rank and file.

But if this might be said of certain presidents and councils in the past, it cannot in fairness be laid to the charge of the present executive.

For at no time in the history of the Institute have the members of the Council and the various Standing Committees shown such a lively interest in the affairs of the profession or given themselves so devotedly to their duties. The ordinary member has very little conception of the number of arduous hours that are spent in committee work, and what it means in the way of personal sacrifice to many of their representatives. They, together with the permanent officials of the Institute, have laboured unceasingly in the interests of education, in promoting public lectures, in all matters affecting architects and public bodies, and last, but not least, in their efforts to obtain a united and consolidated profession.

It would seem that this year a strong effort is to be made to capture the seats on the Council by a well-advertised group of architectural reactionaries whose avowed purpose is to split the Institute on the question of Unification, and whilst professing a lukewarm sympathy for Registration, doing all in their power to make Registration an impossibility for all time. In place of a constructive and progressive policy they offer a policy of pure negation.

There is nothing easier or more harmful than destructive criticism, nothing more difficult or more helpful than real constructive criticism.

Doubtless there is much in the present Council's proposals for Unification and Registration that is open to improvement, much that by wise criticism and friendly suggestion could be amended and improved upon. A policy of pure negation can lead nowhere, except perhaps into the limelight for the few and the outer darkness for the many.

But whether you believe in Unification or do not believe in Unification it is your plain duty if you are a member of the R.I.B.A. to vote at the forthcoming elections. The greatest grumblers are usually those who have not taken the trouble to vote.

If you have a vote and do not use it you have no right to offer any criticism either destructive or constructive on any action that the executive may take. One way or the other the members will have the executive they deserve, and it is to be hoped that they will deserve a good one.

Notes and Comments

Fire-resisting Construction Vindicated

THE earliest newspaper accounts of the fire at Chicago on March 15 did a serious injustice to fire-resistive construction. We seize the earliest opportunity of contradicting them with authority. We are indebted to Mr. Ernest McCullough, Associate-Editor of "The American Architect," for the first clear statement of the real facts of the case, which he has kindly set forth in a letter addressed to the Editor of this Journal. Even the New York papers, it seems, handled the facts rather carelessly. They spoke of the fire as being "in the heart of the loop," whereas it was fully half a mile outside the "loop district," and was on the west side of the river; there were, moreover, graphic but entirely false stories of fireproof buildings "burning like dry tinder," and so forth. Thanks to Mr. McCullough, we are able to pour a few "cold-drawn facts" on these blazing misstatements. We have it on this gentleman's authority that the damage did not run into "millions of pounds sterling," but will hardly reach £300,000. Mr. McCullough observes that the great fire of 1871 did not reduce all Chicago to ashes, but destroyed an area of a mile by a mile and a half out of a total area comprising (at that time) about fifteen miles from north to south and six or seven miles from east to west. "Unfortunately," writes our informant, "the city was not rebuilt along fire-resistive lines. There was a rush to rebuild, and it was not for a number of years that much attention was paid to fire-safe construction," the main object being to build quickly to resume business and secure rents at the earliest possible moment. "While many fine buildings were erected, few of them were fire-resistive, and many are to-day classed as fire-traps." Although nearly all the buildings erected since 1900 comply with the fire-underwriters' requirements, such buildings cover less than one-half of the total area, and mixed in with them are hundreds of "fire-traps." At the seat of the recent fire there were very few structural steel or reinforced-concrete fire-resisting buildings. Most of the buildings were not more than seven or eight stories high, and had much woodwork inside them. It was in a block containing some seven-story buildings having well-wooded interiors, and containing besides a "two-story fire-trap" that the fire started. The newspaper reports stated that two ten-story buildings were wrecked; but there were no ten-story buildings in that block, and the highest buildings burned were of seven stories. The twenty-first story of the Burlington building could not have caught fire, because the building was but fifteen stories high. The fire was carried by wind-borne wood embers to and through the windows of the eighth and ninth floors, setting fire to the wood furniture and paper documents with which the interior was stocked; and wooden floors contributed liberally to the disaster. While the contents of all the floors from the eighth to the fifteenth were destroyed, nearly all the damage suffered below the eighth floor was from water, and the day after the fire the lifts were running to the fifth floor, and two days afterwards all the floors up to and including the fifth were occupied for business. "Three days after the fire the sixth and seventh floors were occupied by busy tenants, and five days after the fire the eighth floor was occupied, and all the lifts were again running to the fifteenth floor." Our correspondent adds that by the time his letter reached us the whole building would be again occupied; and he makes the very important comment that "had the building been sprinklered, the automatic sprinklers on each floor would have prevented any fire from getting much headway. Unfortunately it was not sprinklered; and as the fire started on the eighth floor the firemen could not get into the upper floo to extinguish the flames there. The building is going be sprinklered." None of the structural framework w damaged; the contents burned fiercely without injuring and Mr. McCullough is certainly justified in claiming th the fire was in fact a great triumph for modern fire-resisti construction. Our readers will, we are sure, join us thanking him very heartily for the trouble he has tak to vindicate fire-resistive construction against the fa inferences derivable from exaggerated newspaper accoun We are in complete agreement with him that, so far fr being discredited, fire-resistive construction has emerg triumphant from the fiery ideal at Chicago.

The Royal Academy Exhibition

It is a startling fact that British art is not much ol than the Royal Academy. It was not until 1760 that British artists, having previously attracted the attent and secured the confidence of the public by presentin fine collection of paintings to the Foundling Hospital, strong enough to hold their first real exhibition—that 1760. It was held in the rooms of the Society of A There was nothing to pay, and the exhibition "was mobb by its constant throng of visitors." The principal art did not relish being "mobbed," and in 1761 took th exhibition to Spring Gardens, charging a shilling for catalogue, which had the functions of a season ticke entitling its possessor to repeated admission. Next y there was a charge of a shilling for entrance, and the ca logue did not count; but Dr. Johnson wrote in it an apol for the daring innovation of making a charge for admiss Artists were surprised to find that there was actuall public who would pay to see their works! They con quently formed, in 1765, "The Incorporated Society Artists in Great Britain," the funds being devoted to improvement of art teaching. Then they prayed the K (George the Third) to lend them his patronage, and approval was signified on December 7, 1768, and he knigh Joshua Reynolds, its first president. Architecture included in the first curriculum of the teaching which been always as a fundamental feature of the activitie the Royal Academy, but the professorship of sculpture not founded until 1810. In 1780 the King allotted to use apartments in the new buildings at Somerset Ho Here they remained till 1838, when they removed to National Gallery. To their present home in Burlin Gardens they migrated in 1868, exactly a hundred y after the foundation of the Royal Academy.

A New "Journal" Feature

In this issue we begin a new feature which we think be of considerable interest to our readers. We call it Pictorial Review," and it consists of a series of illustrat of "current, practical, or curious interest." Archit during their wanderings must frequently come ac buildings that excite special interest—perhaps becaus some happy effect of composition, some delightful pie detail, some peculiarity of design or construction. things, although they may not justify a special ar obviously deserve the light of publicity; and the which we adopt this week seems to be the best metho accommodating them. We cordially invite contribu to these pages. There is no need for the photograph be of a large size or of fine finish. The ordinary snap if taken under favourable conditions, makes an exce reproduction. Photographs should be accompanied few words of explanation or comment. Drawings sketches are also admissible.

Architecture at the Royal Academy

THE architectural room at the Royal Academy this year seems more than ever to have become that modern product—a one-man show.

Architects may be busy, and at this time staffs xpensive luxuries; still, one cannot help feeling that odern habit of employing the popular draughtsman of oment tends to divorce the building from its author ive a sameness to our shows. Mallows, Lucas, Walcot, , so we date the years, not forgetting poor Gascoyne ick Horsnell—all of them beautifully trying to make r bricks, generally with very inadequate straw. Who g us has not struggled with another man's disap- ment, trying, often vainly enough, to make it look like itecture. The draughtsman, and later the craftsman, f sympathy with it, and little understanding, does his or his best, the architect finally hardly recognizing sult of his effort, the thing he had fondly hoped would the proud product of his brain.

is natural, war memorials of one sort or another form portant part of the exhibit under review, ranging as do from the ornamentally useful to those that are monumental in character. Someone has said that ssence of the monumental is a suggestion of the al. We of this time know who our soldiers were and they fought; we even imagine we know how they ed. It is therefore not to us our artists need address elves, but rather to our children's children, that they know in their time what England did and how she hen these monuments of war were erected.

stions of cost, the dictates of others' ambition, com- s, the power of those who are ignorant—these are of the troubles with which the artist has to contend. srs. G. and A. Gilbert Scott in their design for Beau- College memorial have attained much. The propor- g and horizontal treatment of casket above altar backed by the low parapet on either side from which ple vertical motif rises enclosing the figure on the is quite delightful in its effect of simple majesty. cott's proposed naval monument, attempting con- bly more, surely suffers from the multiplicity of its at the base.

o models done in competition for the memorial at y are very effective. The directness of effect attained r Robert Lorimer, his great judgment as to the g and mass of the sculpture, his economy of ornament eling for material, the completeness of the whole, this monument worthy of any town in Scotland. yfe's elegance is only marred by a certain lack of ness—his doubt, for instance, as to where the inscrip- ould find its place.

ther very satisfying monument, quite different in ter from those already mentioned, is that designed fessor Beresford Pite to be placed just outside the teway into the Cathedral Close at Canterbury. and traditional, yet civil rather than religious in , most appropriately placed, it is a worthy modern n to the wayside crosses of England.

rch building, apart from war memorials, hardly s to have begun again. A design for quite a large at Ealing, by Mr. P. M. Andrews, is large in scale aditional in manner. The general effect is a little ired, however, the stonework careless in drawing, the rather inclined to waver at the top.

h of the Gothic work shown, in fact, approaches the in detail, is lacking in freshness, and displays some f affection in its doing.

dwin Lutyens shows us vast sheets of his India—the icent approach of an Indian potentate; streets of and homes of menials; an Indian "Place de la e." Nothing commercial here, nothing even European. Unfortunately we are not shown where all this magnificence leads to. Another drawing shows museums raised aloft on mighty bases, as it were resting on the glory of the British past, the firm rock of the English rule The upper portions of these buildings, however, make one pause and ask why such strength below and so very little up above. The artist sometimes is a prophet; let us hope that our reading of his prophecy is wrong.

There is a good deal of other foreign and Colonial work, much of it good, some in the Lutyens manner, and some not. A Hostel at Ypres, by Messrs. C. Nicholas and J. E. Dixon Spain, is beautifully shown and gracefully designed in the local manner, a charming-looking little building, peaceful and quiet. Country house work seems slow in its return; many well-known pre-war names are missing. Mr. Prentice, it is good to see, has two of his pleasant renderings of Cotswold country houses back on the walls. Mr. Boddington also has a very effective addition to a house in Cheshire, charmingly reminiscent of its locality.

Housing schemes are still much in evidence with their modern formal lines, the feeling of crowds out of factories, the sudden planting of new towns. Messrs Adshead and Ramsey submit an eighteenth-century-looking assembly of buildings, modest and efficient-looking.

Turning to works of a civil nature, three large drawings represent wonderfully the contrasts, the clash of ideals, of modern London, forming together the centre of interest, perhaps, of the exhibition. On the one hand we have the huge massed pile of the modern offices pregnant with the business of to-morrow; the new Thames-side, that new life we are to see when Mr. Lloyd George gets our external affairs in order; a new life suggesting strange things, big with foreboding; a new scale of things for London; the American zoning law; commerce triumphant.

On the other hand we have suggestions of another London, the London before steam, before even Wren, a London many of us hoped had gone except from the London Museum and the galleries of Wardour Street. Commerce speaks once again, or rather cries somewhat loudly the wares it has to sell. Here is the American with his column, his big feature; the column, that aristocrat of the building world, birth, education, usefulness, a dignified personality; the column wrenched from out his temple—maybe a disgusted aristocrat existing in a democratic age. Even to democrats commerce imagines he expresses qualities of worth—a somewhat cynical reminder of other uses, other civilizations.

Of smaller works of a civil nature there are many pleasant examples, among others Messrs. Voysey and Morgan's design for Hastings Music Pavilion, a brilliant effort at cheerful realism and design in concrete and plaster. With more buildings like this one erected round our coasts, the cold weather deadliness of our seaside resorts may disappear.

On the whole, the year's exhibition may be said once again to approach its position of former years, as our best yearly collection of representative English work. Housed in an insignificant room, the drawings not sufficiently technical for an audience of architects, not sufficiently alluring to attract the public, it hangs as a compromise, and stakes a claim that architecture continues to represent a part of the yearly output of the arts.

Even if somebody's soap emporium proudly flaunts the glory of a neighbouring museum, and Greek details continue to adorn strange parts of our factories, even if the sentimental be the most sought after quality in our artistic expression, try as we may we continue to represent our country and mark off the story that is ours.

GEORGE DRYSDALE.

The Sculpture Rooms: A Moderate Display

British sculpture, if it is fairly represented in this year's Academy, is not prospering prodigiously. That is the chief fault one has to find with it. Abundance of talent is exhibited, but very little inspiration. The works seem to lack stimulus. It is of no use to disguise the sordid fact that art and financial prosperity languish or flourish together. Not that they have the same root, nor even that they are planted in the same soil, but that both are affected by the same atmospheric conditions, rain or shine, frost or thaw.

It is, we take it, a direct consequence of "the need for economy," as it is somewhat euphemistically called, that, large commissions being scarce, sculptors are producing very little else but figurines. Their highest ambition seems to be the making of little images of stone or bronze to stand on the mantelpiece.

It would not seem that portrait busts are being commissioned to the normal extent—at all events, they do not seem to be as numerous as usual. For the most part, however, they are quite excellent, even though success depends almost as much on a fortunate subject as on the skill of the sculptor to deal with it. Sir Aston Webb, for instance, is a splendid subject, and Sir Thomas Brock has done it justice. Mr. Maurice E. Webb also is as fortunate in his sculptor as Mr. Paul R. Montford is in his subject. Then Mr. W. J. Locke is lucky to have had the close attention of so excellent a modeller as Miss Maggie R. Mitchell is here seen to be, while Mr. Hartwell has modelled a very fine bust of the late Sir Herbert Bartlett to be placed in University College, London. Of subjects that are architectural in a less personal way, however, there are few or none. We mean, that there is no sculptured group designed expressly for the adornment of any particular building—a lamentable fact that testifies eloquently to the severity of the trade depression from which we are now emerging so rapidly as to encourage the hope that next year's Academy will be far richer in architectural sculpture than it is to-day.

By far the most ambitious work, in subject as in size, is Mr. John Angel's bronze figure of Victory, which has been erected in the courtyard. A colossal figure of Victory is scornfully trampling underfoot a monster—half wolf-jawed dragon, half vampire, which Mr. Angel may have derived from the peculiar zoology of heraldry, or may have evolved from his own inner consciousness. It is, at any rate, a fearsome beast, its conception and execution redounding much to the sculptor's credit. The group will lend great dignity to the Exeter war memorial; and there is even more artistry in the other bronze figure that Mr. Angel had designed for this memorial—"A Prisoner of War." This is a masterly study in facial expression, and induces in the beholder a strong desire to see the synthesis of a memorial of which these two fragments are vouchsafed us.

Memorials of one kind and another are as numerous as they have been at the academies of the past four or five years, and the quality seems to have improved somewhat, although in the war memorials there is but little variation on the old themes—the haggard soldier in trench regimentals, his face heroically suffering or defiant. This sort of thing has become a stale convention; but it is well handled of course, with varying degrees of success, although in so stale a theme there is but limited scope for individual merit, by Mr. W. McMillan, Mr. W. Reynolds-Stephens, Mr. F. J. Wilcoxson, Mr. Herman Cawthra, the late Lady Feodora Gleichen, Mr. C. S. Jagger, Mr. H. Poole, Mr. Albert Toft, Mr. F. Derwent Wood, Mr. L. F. Roslyn, Mr. F. Arnold Wright, Mr. C. L. Hartwell, and Mr. Gilbert Ledward, who shows a very meritorious design for "part of bronze frieze for the Blackpool war memorial." If the part is not æsthetically greater than the whole, Blackpool should be proud of its monument.

The most truly monumental work among the sculptures is the tomb to the Duke of Norfolk, in which the face of the recumbent effigy has been wrought with consummate s and rare fidelity by Sir Bertram Mackennal. Mr. W. R Dick has a sketch model of the Earl Kitchener memo chapel; and conspicuous among the smaller memorial the finely proportioned and serenely dignified tablet, wh is to be placed in Westminster Abbey to the memory the late Sir William Ramsay, of whom Mr. C. L. Hartw has modelled, as a centre-piece, a singularly life medallion portrait.

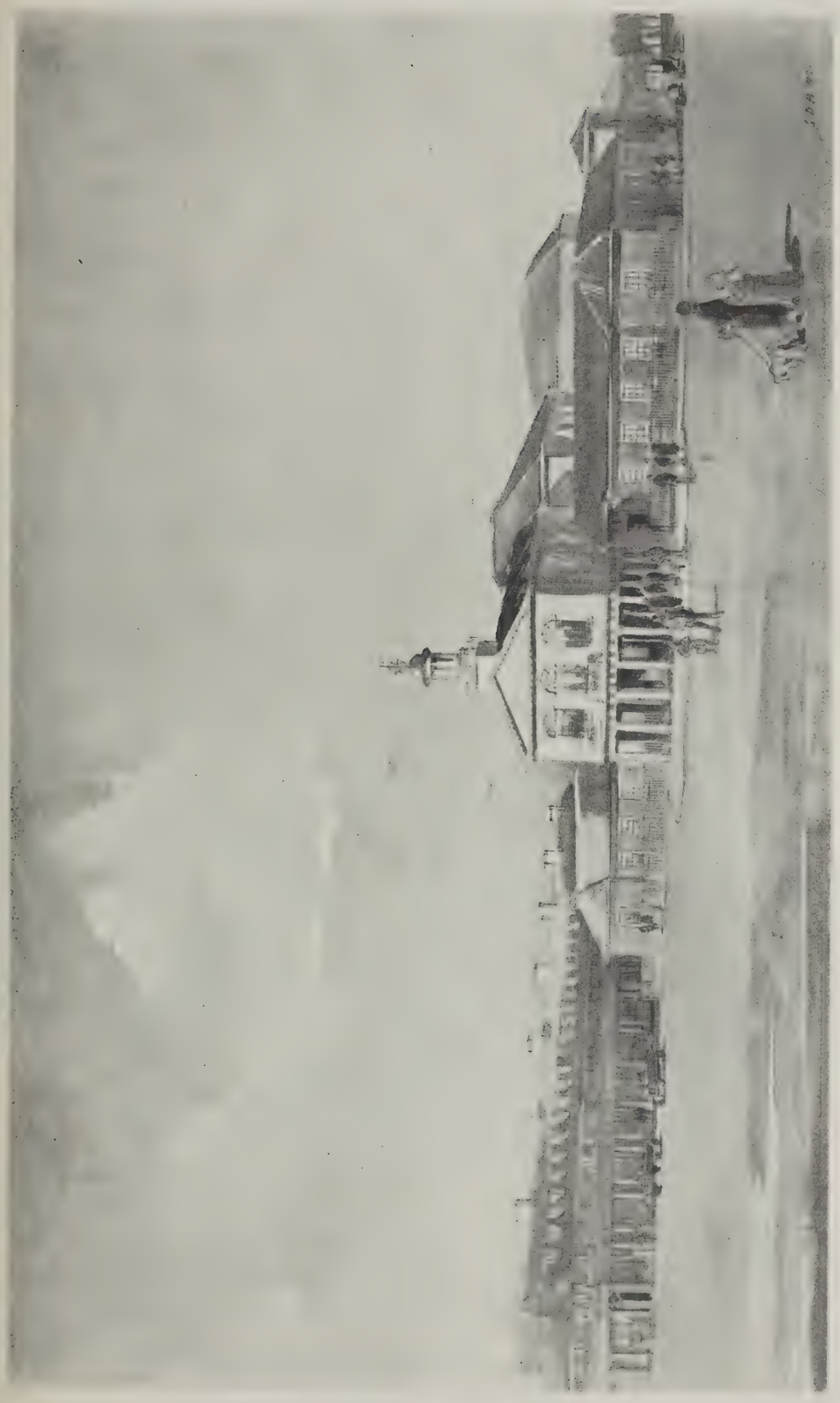
There are more memorials than we have space to m tion; but there are two or three of such exceptio interest that they cannot be passed over. They are St. Olave's School war memorial, for which Mr. W. R nolds-Stephen has taken as his central motif a beautif modelled figure of St. Olaf in armour; the same sculpt poetical "Spirit of Youth," part of a memorial to erected at King's College School, Wimbledon; the secc premiated design by Messrs. E. G. Theakston and S. Babb for the Paisley war memorial; and the late W. Colton's pathetic tablet to the memory of the gallant of W. L. Wyllie.

Thornycrofts and Pegrams, Pomeroys and Bro Reid Dicks and Goscombe Johns, Framptons and Derw Woods and Tweeds, and other exhibitors of old reno are here to be seen, though not in profusion; and it i unnecessary as impracticable to mention their works detail; but it is barely just to draw attention to the arr ing group contributed by Mr. P. G. Bentham, wh "Fisherman and Nymph" is the one really arresting gr in the exhibition, less because of its technical execu than because it is the most truly imaginative group t came under our observation. As for the figurines mantelshelf ornaments, all that need be said is that t deal in a trite manner with conventional themes. T always suggest students' exercises in the expression of emotions. In any year you shall find a little image inten to express, facially and in attitude, the manifestation joy, grief, delight, anger; and mostly they do it as we the limited size will admit.

We leave the most interesting features of this exhibi to the last; these are two bronze busts by Antoine Bourd —one of Surgeon Koeberlé, the other of Anatole Fra After the comprehensive way in which Mr. Bartle dealt with the art of Bourdelle in recent issues of JOURNAL, it would be idle to discuss the genius of artist. One may say, however, that despite their arc nature, these two busts possess a scholarship and a mas which make everything in their vicinity appear slips and misformed. This implies no criticism of the surro ing sculpture. It is simply a way of saying that Bourd excels.

The Paintings

Two or three years ago the Academy was an org dream gardens, slumber valleys, and enchanted la appearing or disappearing through sunsets and pu haze. To-day these have vanished as enchanted th should; impressionism seems to have flickered out, an its place you have the Dutch minuteness translated terms of culture and fashion—that is to say, withou provinciality and without its sensitiveness. Mo fashionable art revels in gorgeous colours and smas contrasts, but at any rate it is vigorous and exuberant full of potentialities. John looks extremely unwashe such "classy" society, but Charles Sims is in his elem Surely his "Countess of Rocksavage" will be the pic of the year. Rothenstein has an exquisite portrait of self, and Walter W. Russell upholds his reputation unique draughtsman in his portrait of Sir Norman M If it is not full of art one can at least say that this y show is full of life.



MUNICIPAL BUILDINGS AND SHOPS, TILBURY. ADSHEAD AND RAMSEY, FF.R.I.B.A., ARCHITECTS.
(Royal Academy Exhibition.)

PROPOSED WAR MEMORIAL CHAPEL, CHARTERHOUSE SCHOOL.
G. GILBERT SCOTT, R.A., ARCHITECT.
(Royal Academy Exhibition.)

The Church of St. Giles-in-the-Fields

WE publish in this issue the measured drawings which have been awarded the £5 5s. book prize offered annually by Technical Journals, Ltd., to students of the Architectural Asso-ɔn. The jury of A.A. Masters in judging the work ɯitted came to the conclusion that they were justified ɾommending that the prize should be split up as follows: G. E. Hubbard, £3 3s.; Mr. J. S. Foxall, £2 2s.

Ie subject measured is the church of St. Giles-in-the-ɛs, and the authors of the drawings are to be compli-ɪed upon the all-round excellence of their work. The lving notes on the church have been courteously sup-ɛ by Mr. Hubbard :—

Ie present church occupies the site of a hospital ɪled, about 1117, by Queen Matilda, consort of Henry I, ɛprous persons belonging to the City of London and ɛ ounty of Middlesex.

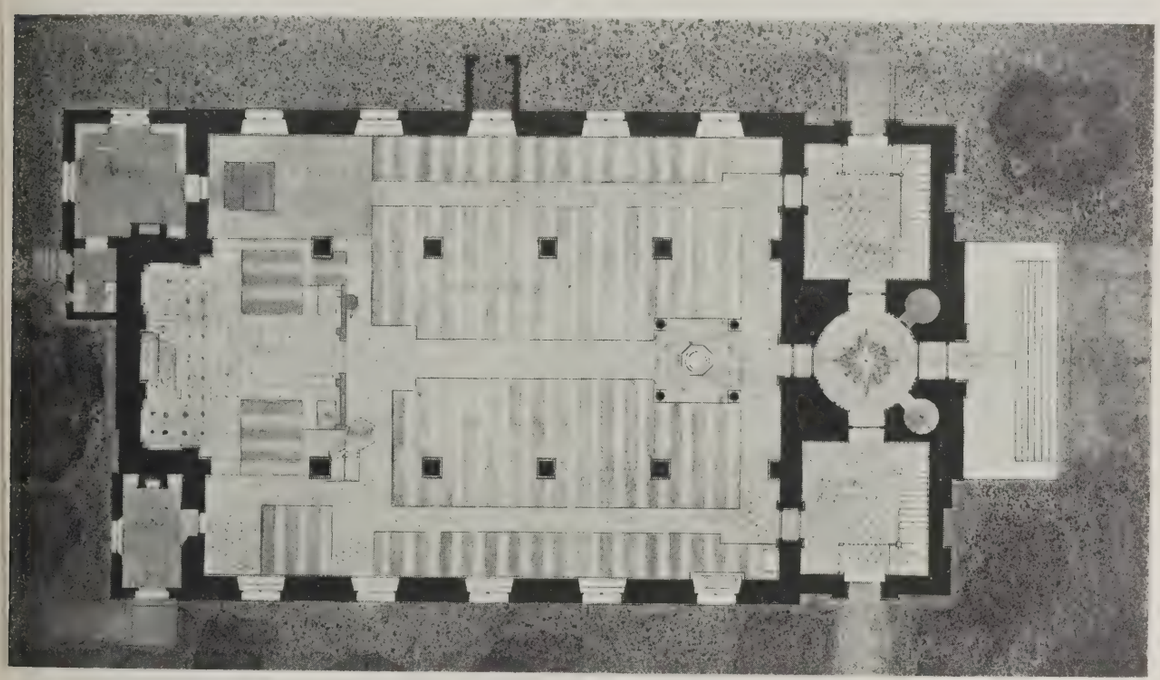
I 1354 this hospital was granted to the Master and ɪren of the Order of Burton, St. Lazar, of Jerusalem, -cestershire, and it became a cell to that Order till the of the dissolution of religious houses by Henry VIII, ɔranted it to Lord Dudley in 1545. Shortly after this ɕhe chapel was made parochial.

ɾ628 old St. Giles was taken down and replaced by a ɕchurch. This was found to be too small and incon-ɪit, as a result of which application was made for an f Parliament to rebuild it. Henry Flitcroft, a pupil ɔbs, was commissioned to prepare plans for a new ɪ, which resulted in the present structure being ɛd in 1734.

ɪ steeple, of pleasing proportion and containing a fine ɪf eight bells, consists of a tower surmounted by an ɑn, enriched at the angles with attached Ionic ɪns, and supporting a belted spire. It resembles ɪs steeple at St. Martin's-in-the-Fields, and appears ɲe been inspired by it, to a certain extent.

St. Giles gains considerably both externally and internally by its narrow sanctuary, the windows of which are filled with excellent stained glass. The interior, of the galleried basilican type, is well proportioned, the galleries being made a definite constructional feature. In 1875 it was rearranged and decorated by Sir Arthur Blomfield, and at a later date by Butterfield. The organ, which dates in part from 1671, still occupies its original position in the western gallery.

The church contains the memorials of many eminent persons, especially noticeable being those of Lady Dudley (*d.* 1670), whose effigy lies at the west end of the north aisle; Shirley, the dramatist (*d.* 1666); Penderel, "preserver and conduct to his sacred Majesty King Charles II after his escape from Worcester fight." Early last century an entrance gateway was erected from the design of William Leverton, in which is introduced an ancient piece of sculpture in oak representing the Last Judgment.



PLAN OF ST. GILES-IN-THE-FIELDS, HOLBORN.
MEASURED AND DRAWN BY J. S FOXALL.

Guards' Memorial Trial Structure

In St. James's Park an unwonted irruption of common sense is visible to the naked eye. A trial structure is being put up on the site proposed for the Guards' Memorial. Thus the committee who have the matter in charge will be able to form an opinion as to the fitness and axiality of the position assigned to the memorial. It is rather a pity that the scaffolding was not erected on wheels, so that it could be shifted hither and thither at will for the nicest possible adjustment. Not but what it appears to be in most satisfactory alignment from the Horse Guards building, through the gateway of which a glimpse of it can be caught from Whitehall. It is a thousand pities that a similar course was not adopted before putting up the Royal Artillery monument opposite but not perfectly axial to the Duke of York's column in Waterloo Place.

CHURCH OF ST. GILES-IN-THE-FIELDS, HOLBORN: MAIN ELEVATION. HENRY FLITCROFT, ARCHITECT.
MEASURED AND DRAWN BY J. FOXALL (ARCHITECTURAL ASSOCIATION)

CHURCH OF ST. GILES-IN-THE-FIELDS, HOLBORN: LONGITUDINAL SECTION.
MEASURED AND DRAWN BY GEORGE E. HUBBARD (ARCHITECTURAL ASSOCIATION).

Modern Housing in Holland

MR. ARIE KEPPLER, Director of Housing in Amsterdam, recounted his experiences and illustrated his achievements for the benefit of a delighted audience at the Architectural Association last Monday week.

The entrancingly broken English in which the lecture was delivered added in no small degree to the charm of the entertainment; but when words failed, eloquence of face and gesture served admirably to convey the desired information.

"Where officialdom make town extension bad! ver' bad." Could Demosthenes himself do better? Mr. Keppler began by recapitulating the history of Amsterdam from its early days as a fishing village, until about 1500 it began to develop itself into a town of commerce, art, and science.

The Canal System

The network of canals formed a splendid town-planning element in an artistic, as well as in a practical sense, and in 1680 the second large extension of the town took place, planned to accord with the canal system. Along these the old Dutchmen fixed front lines, but at the same time back frontage lines were not forgotten.

After 1870 the town spread out yet further, but by lack of insight it did so in a manner that is now marked in the international black list of town extensions. Canals were filled up, bridges lowered, old buildings demolished. And then, at the end of the nineteenth century, Berlage was commissioned to design the extension plan for South Amsterdam. And this signified once and for all that town planning was recognized not to be a task for officials, but for architects, and especially for architects outside officialdom.

Class Divisions

A rigorous division into official quarters for labourers, middle classes and wealthy, was decided on, and a new architecture arose, free from historical styles.

Several gifted young architects were now enthusiastically devoted to the development of national architectural art, in spite of individual differences.

It will shortly be necessary (said Mr. Keppler) to make a new extension of the town. This will probably be carried out by officials making a programme, including the requirements of traffic, housing, playgrounds, and zoning, and giving the limits to the number of houses per acre. Then the architect will come in. He ought not, however, to make a building plan for fifty years or longer, but to stipulate the important lines of the plan, and architects coming after him would design the plans for the building sites and regulate the plan.

Amsterdam's House Shortage

In Amsterdam the shortage of houses is estimated at 20,000. The clearance of slums has stopped, and there are yet 15,000 slums to destroy.

In 1901–2 Holland got its first Housing Act, which provided that for direct housebuilding and for housebuilding by public utility societies the municipality can lend from the State the total amounts necessary for erecting the houses. Amsterdam has in this way erected nearly 10,000 houses. There are 8,000 in course of erection, and thousands more planned.

In the last years the private builder could get a subsidy from the Government for housebuilding, but they did not build houses for labourers. Instead they produced too many houses for the middle-classes, who find the houses too small and the rents too high.

Municipal Dwellings

The municipality has provided a large number of dwellings for its working-class inhabitants. Up to the present time 4,000 families have been housed in these, 2,000 more dwellings are in course of erection, and plans are prepared for bringing the total number up to 10,000 at no very distant date.

The town has assumed the duty not only of supplying the houses to meet the general shortage, but of providing houses for those for whom no one else is able or willing to find accommodation, and especially for large families.

Women managers have been appointed to take charge of municipal houses and their tenants. There is a staff of thirteen managers working under the chief woman manager.

Design of New Work

Great care is taken in designing the new dwellings, some groups of houses being designed expressly for families with five or more children. Tenants who do not pay their rent promptly, or are destructive, noisy, drunken or quarrelsome are removed into one of the special areas set apart for them. The work of the women managers is extremely valuable from a social point of view.

Nearly all the plans of the municipality and the public utility societies were designed by architects outside officialdom, and the houses are built by contractors, by direct labour, and by building guilds.

The municipality of Amsterdam know that 70 per cent. of all the houses in the town are of the labouring class, and that the extension must contain nearly all labourers' houses.

If New Amsterdam is to be a good town it is necessary that housebuilding should have the greatest attention. Neither "jerrybuilders" nor the ungifted, but the best architects have to take part in the work of solving the housing question, and nowadays the best architects are at work.

Employing the Architect

In former times the private builder was master over all the schemes, and built as cheaply and as badly as possible.

Until the new development of Amsterdam began architects had only built country houses, commercial buildings, etc., but now they have to solve a new problem. The first street-fronts they made were not more than a collection of individual blocks of houses; but, supported by the interest of the population, architects soon began to give the best that was in them.

At first it was very difficult to make different architects collaborate, but they work together under the ar tectural committee instituted by municipality. Every plan has to passed by this committee, which however, no power to make plans it Up to 1910 architects built in histo styles, but after the coming of Berl with his rationalism, there was no n imitation of old styles. This rationa produced cubism and expressionism, examples of both forms can be see modern Dutch housing. The latter l to intellectual anarchy, but the indiv alism that follows is a child of the d

Discussion

Mr. Keppler concluded his lecture an interesting series of lantern sl illustrating different types—good, and indifferent—of Amsterdam hous Proposing a vote of thanks to the spea Mr. Raymond Unwin congratulated on his knowledge of English, and ferred to the difficulties of Dutch hous especially the cost of keeping out water. He congratulated Holland on great work she was doing in housing town planning.

Mr. Hamp, seconding, said that D architects were fortunate in the sympa of the officials. Their materials g them fine opportunities, and the deve ment of huge areas on reasonable p was wonderful.

Mr. E. G. Culpin said that he had the houses, and they were still n impressive in real life. Architects interested builders in their designs wonderful results. The human t was found in colour schemes and inte fittings.

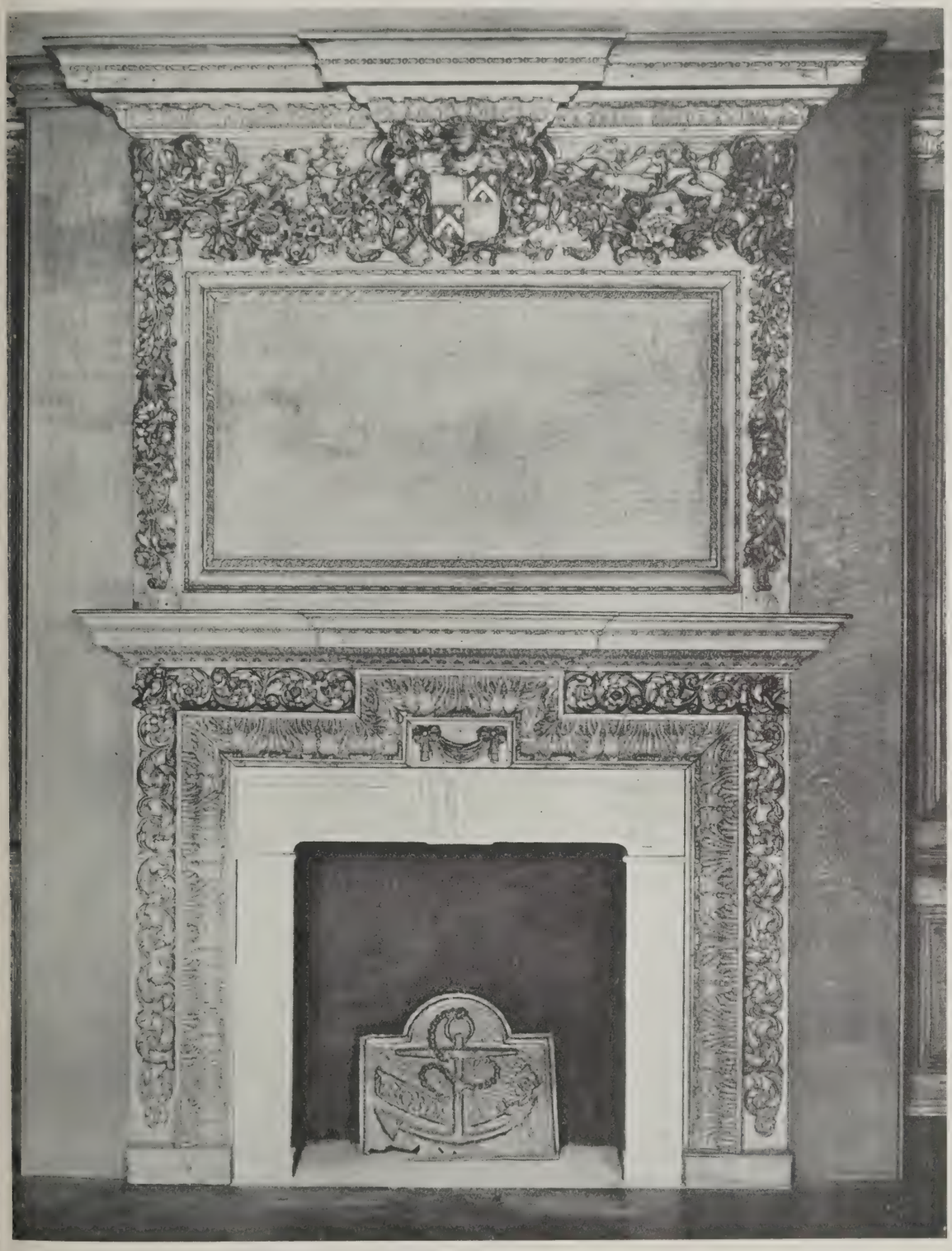
Mr. Robertson questioned the finan side, and said that official architects better than none. Mr. Newton said three interesting lessons were to be le —the management of municipal est by women, the co-operation of archit ensuring balance without similarity, the adventurousness of municipaliti giving younger architects an opportu of expressing the spirit of the age.

Mr. Keppler said that the houses cost about £800, and wages were hi in Holland, while they had the addit expense of piles and cement.

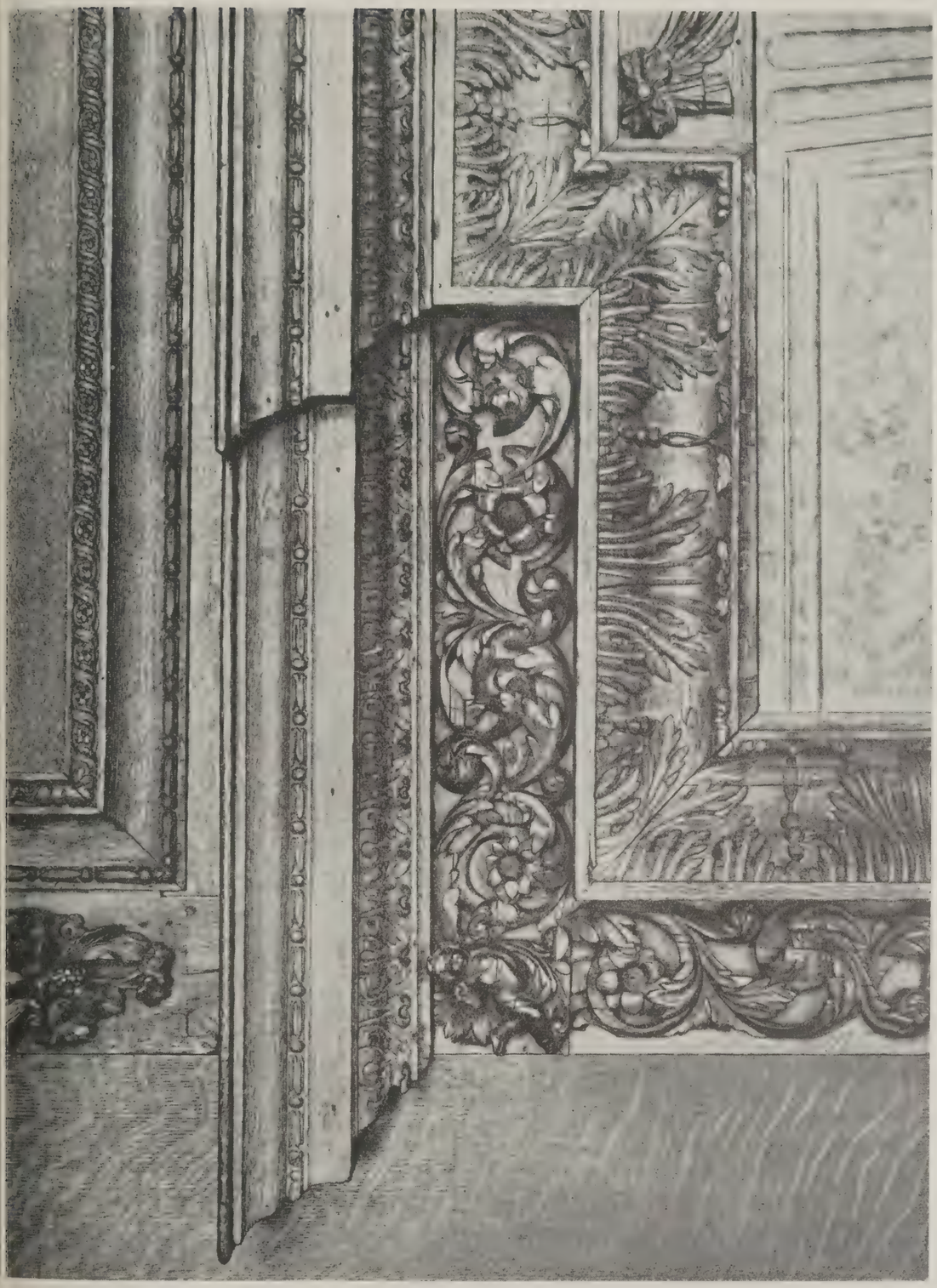
The Guards' Memori

A formal inspection has been mad the site of the projected Guards' Mem and of a temporary wooden repres tion of the Portland stone monun The temporary memorial is close to much-discussed refreshment kiosk in James's Park, which is to be remove connection with the memorial sch Among those present at the inspe were the architect (Mr. H. C. Bradsh the sculptor (Mr. Gilbert Ledward), Earl of Crawford (First Commiss of Works), with Sir Lionel Earle permanent secretary, the Earl of C (Chief of the Imperial General S General Jeffreys (commanding the Lo District), Sir Alfred Codrington, and se other members of the memorial mittee. The inspection was mainly site effects and general appearance.

nitectural Details. 21.—Chimneypiece from No. 3 Clifford's Inn, London



The above extremely rich example of Wren period design was taken from No. 3 Clifford's Inn, and is now in the Victoria and Albert Museum, with whose permission it is here reproduced. It is one of the most beautiful pieces of English woodwork executed during the great period of wood-carving between 1686 and 1688.



This illustration shows a detail of the carving below the mantelshelf. By contrasting it with the carving executed above the panel of the overmantel shown in the preceding plate, one realizes with surprise that the working is entirely dissimilar. Here the carving is beautiful but academic, but on the overmantel it is free and extremely original.

Correspondence

The Unification and Registration Controversy

To the Editors of THE ARCHITECTS' JOURNAL.

Sirs,—We are indeed indignant at Mr. Keen's unjustifiable suggestion that we "stole a march on our provincial members by seeking a snap vote at a London meeting." With reference to the meeting on February 7 a notice was published in the "Journal" of January 28, at a heading in large type, "Special General Meeting" That notice gave the resolution to be moved, a notice in red also giving the resolution was pasted the front of that number of the Journal." Town and country members of the same notice, and the secretary received about 170 letters from members who could not attend, and who all supported the resolution. The room was crowded, and the presidents of Allied Societies from Liverpool, Birmingham, Liverpool, Sheffield, and Manchester were present. There were also speakers from Leicester and Cambridge, and other members from the provinces attended. During the evening the President referred to those "who came from outside London and who came at some inconvenience." The resolution, *exactly as submitted to every provincial member*, was voted on with the well-known result that 112 members supported it, and only 66 men voted against it. In the face of these facts how dare Mr. Keen state we "stole a march on our provincial members by securing a snap vote at a London meeting" It has been apparent for some time that Mr. Keen fails to appreciate the meaning of the word "Unification." Does our hon. sec. know what a "snap vote" is?

With regard to another point raised by Mr. Keen; of course, we gave the Parliamentary agents the exact wording of the necessary part of the resolution passed by the Unification Committee, and not Mr. Keen's subsequent explanation of it. If he was of opinion that only qualified or approved architects should be admitted to our Institute, why did he not say so at the meeting on May 21? Here again, he had a chance at the meeting of that committee on February 7, and again he failed to do so.

Mr. Keen asks members to "read what the Unification Committee says"; we have been urging this for months past, and that was why we recently sent you important extracts from the report in the "Journal" showing as plainly as possible that speakers were in favour of admitting "all architects" to the Institute and not only those men our Council in their wisdom might think entitled to the honour.

Mr. Keen accuses us of opposing registration. We sent out a pamphlet to every member stating "The R.I.B.A. as a body is not opposed to Registration," and we have stated that principle on every available occasion.

Just one other instance of the questionable methods employed by some supporters of the so-called Unification Scheme. It is well known that the Unification Committee passed four resolutions on May 21, and that they were published for general information; they were considered by the Council, and subsequently, on February 7, by the general body. The whole of the minutes of the Committee Meeting on May 21 are published in the "Journal" of May 28, page 428, etc. Anyone with the most elementary knowledge of committee procedure knows that a committee can only report as a result of resolution or resolutions afterwards recorded in the minutes. Our Council published in the "Journal" of March 25, on page 308, a statement that the Unification Committee "issued an interim report . . . for the consideration of the Councils of the R.I.B.A. and of the Society of Architects. This report, which had the almost unanimous support of the whole committee, was, in effect, a recommendation that unification of the profession should be effected by the inclusion of qualified architects in the R.I.B.A.," etc., etc. A reference to the minutes of the Unification and Registration Committee will show that they made no interim report to our Council, or to the Society of Architects, or to any other body.

We leave your readers to form their own opinion, but having regard to the facts recorded above who can wonder at the great and growing indignation of many members of the R.I.B.A.?

A. W. S. CROSS.
H. D. SEARLES-WOOD.
Vice-Presidents, R.I.B.A.
GEORGE HUBBARD.
SYDNEY PERKS.
Secs. R.I.B.A. Defence League.

Sirs,—If Mr. McArthur Butler will refer again to our letter published by you on April 12 he will see we gave two quotations from his speech. We did not "misquote" him either "deliberately" or unintentionally; our quotations were perfectly accurate. He spoke in favour of admitting all architects into the Institute, and we gave extracts from his speech necessary to illustrate his views; he now gives you a longer quotation, which we welcome, as it has the effect of emphasizing those views, and so he helps us. We wish we could have given the entire speech of every member we quoted, but those speeches can be seen in the "Journal," to which we referred your readers.

A. W. S. CROSS.
H. D. SEARLES-WOOD.
Vice-Presidents.
GEORGE HUBBARD.
SYDNEY PERKS.
Hon. Secs. R.I.B.A. Defence League.

Sirs,—I feel sure the following letter which I have received this morning will interest your readers. It is very interesting to know the interest taken in this matter by our members so far from London.

"Dear Sir,—I shall be obliged if you will add my name (as an Associate R.I.B.A.) to the list of members of the R.I.B.A. Defence League.

"Being about 5,000 miles from London one feels scarcely able to take part in a controversy in the professional papers, but there is one point in connection with the above subject that I do not remember seeing brought out in the letters and reports of meetings which I have seen.

"Different prople have referred to the undesirability of bringing all sorts and conditions of so-called architects into membership of the Institute, but what about the people who would not come in?

"I remember the case of a fairly well-known provincial architect (now deceased) who probably could have been elected a Fellow before 1909, or could easily have secured admission to the Licentiates' class, but did not trouble to take the necessary steps to secure election.

"It seems to me that whereas a certain number of architects with doubtful qualifications would jump at the opportunity of joining the Institute opened to them under a 'Unification' scheme, quite a considerable proportion would *not* wish to do so, as they do not now observe (nor would they care to be bound by) the standard of professional practice that the Institute would require them to comply with.

"Without a Registration Act to 'compel them to come in,' unification would actually be as far off as ever, and the 'Architect and Contractor' and 'House Agent and Architect' would continue to flourish as aforetime."

SYDNEY PERKS.

Mr. Sydney Perks has sent the following reply to Mr. Herbert T. Buckland, a copy of whose letter was published on page 586 of our issue for April 19.

Dear Mr. Buckland,—I have consulted Messrs. Cross, Hubbard, and Searles-Wood; and four men representing the R.I.B.A. Defence League would be most happy to meet any four men who represent the Institute on the above Committee to hear their views on the scheme, and any reasons why we should withdraw our strong opposition to it.

Yours very truly,
(Signed) SYDNEY PERKS.

R.I.B.A. Elections

To the Editors of THE ARCHITECTS' JOURNAL.

Sirs,—The election of the Council of the R.I.B.A. is to take place very shortly, and it is very much to be hoped that members will realize the responsibility resting upon them for using their votes. There are about 3,000 possible electors, and yet it commonly happens that only about 800 balloting papers are returned.

A fact like this no doubt discounts the criticism that from time to time is directed against the Council, but although Mr. Grayson has told us that probably no Council has had the confidence of the general body of members more fully than the present one, the duty of sharing in the direction of affairs by taking part in the election remains.

May I hope that you will use your influence in securing a favourable alteration in the number of those who use their votes.

Yours faithfully,
ARTHUR KEEN,
Hon. Secretary R.I.B.A.

Little Things that Matter. XIII—Metal or Wood Forms for Concrete ?

Should metal or wood forms be used for concrete ? A satisfactory answer can be given only after the contractor has made a careful study of the conditions of the particular job to be carried out. No sweeping generalizations can be made. A factor of slight importance on one job may be of the utmost importance on the next. Some of the many points requiring special consideration before a decision can be arrived at have been outlined by a special committee of the American Concrete Institute, and are appended :—

Cost of materials, labour making, erecting ; and stripping form centreing.

Rental cost of metal form panels.

Cost of erecting and stripping metal forms.

Will the metal forms be delivered to the job in time to avoid delay to the construction work ?

Will the use of metal forms require employing a mechanical trade not otherwise needed on the building, and if so, will this possibly lead to labour complications.

If metal forms are handled by sheet metal trade and carpenter labour is scarce, labour conditions may be improved by the use of metal forms.

Will the use of metal forms necessitate purchasing timber for various other purposes, such as bucks, grounds, bulkheads, etc., for which old form timber is originally used ?

If metal floor forms are used, can they be utilized also for wall forms, saving the cost of wood, although the cost for labour on metal forms may be high ?

If wood forms are used for walls, will the excessive material cost overbalance possible economies otherwise offered by metal forms ?

Will the smooth surfaces resulting from the use of metal forms be desirable as giving a better appearance, reducing the cost of pointing or painting or other finishing, or as giving results in any way for which the owner would be required to spend additional money if wood forms were used ?

Will the smooth surfaces, or the possibility of their being oil-soaked, be detrimental and require the expenditure of money for special treatment preparatory to painting. plastering, or otherwise finishing the surfaces ?

Metal forms to a slight extent lessen the fire hazard where salamanders are in use, and because of the heat-conducting qualities of the metal make it easier to keep the poured concrete above 70 deg. while setting.

If the general contractor rents the metal form panels and erects with his own labour, the following points should also be considered :—

Will the use of metal forms cause labour difficulties due to jurisdictional disputes as to which trade should handle them ?

If metal forms cannot be handled by carpenters, will this disorganize the labour forces by necessitating intermittent hiring and discharging the different trades, or can the job be organized to give continuous employment to all trades, thus making employment attractive to the best workmen ?

If the erection and handling of metal forms is let on a sub-contract either to the form manufacturer or to an outside erector, the following points should be considered :—

Will the introduction of another subcontractor tend to slow up the progress of the job and thereby result in an increased cost of any part of the work ? On rush jobs this question of the general contractor losing the absolute control over the speed of the work that he has when all the form-work is done by his own organization may be of extreme importance.

Will the introduction of another subcontractor tend to simplify or complicate the labour situation ? If local labour is scarce, bringing in an outside organization may relieve the situation somewhat.

Can the sub-contractor be depended upon to co-operate with the others to the best advantage of the job as a whole; or will his presence (since he will be primarily interested in the cost of his own work) tend to increase the cost of other work ?

The committee reported that the opinion among contractors seems to be unsettled on the question of superiority of ceiling finish obtained by the use of metal forms. The joints are less in number. There are no costs available to show whether there is any saving in pointing charges on the ceilings.

Liberty's New London Premises

This week we illustrate the new premises of Messrs. Liberty & Co., which are to be erected from the designs of Messrs. Edwin T. Hall and E. Stanley Hall, M.A., FF.R.I.B.A., in Argyll Place, London. The illustration is reproduced from a water-colour drawing exhibited at the Royal Academy, and shows a novel and interesting departure in modern street architecture. The name of Liberty is a household word in art fabrics and furniture. The company decided to build their new premises in the Tudor style, owing to the fact that the Tudor period is essentially English. A Tudor shop brings to the mind a picture of those bygone days when the ancient guilds of the craftsmen and the merchant adventurers displayed, in the beautiful gabled buildings of old London, the productions of their handicrafts and the treasures for which they had sailed so far and endured so much.

There is a glamour about the lavish and riotous days of Queen Elizabeth and Henry VIII, and a house of that period is a fitting setting for the richly coloured and hand-printed silks from Merton Abbey and the East, for the brocades from Italy, France, Japan, and Shantung, for the silken and woollen carpets from Ispahan, Bokhara, and Shiraz, for the jade and porcelain and embroidered shawls from China, and all those other beautiful examples of the craftsman's work with which Liberty & Co. concern themselves and which they offer to the public to-day. These will be shown in rooms of a height and kind that people are in the habit of living in, and will be seen in their proper proportion and judged on their true merits. Rossetti, Burne-Jones, Watts, Leighton, Albert Moore, Whistler, and Alma Tameda were early customers and friends who visited the little shop in Regent Street opened by the founder the business, the late Sir Arthur Libert in the latter part of the nineteenth centur

It may well be that the large numb of visitors who come to London from a over the globe—from places where the is an abundance of Renaissance or oth architecture—will be interested to see London Street of Tudor architectu carrying on the tradition of "half-tir bered" work. The last large buildir still extant in London erected in this sty is Staple Inn in Holborn, which was bui over 320 years ago.

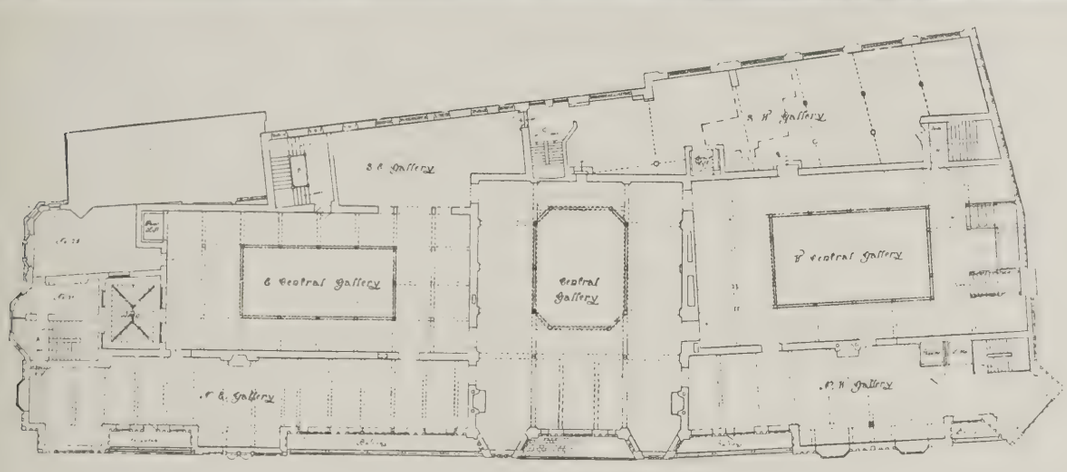
The site of the new building is a island one, surrounded by roads, and th principal front occupies the whole of th south side of Argyll Place, the roadwa of which is to be doubled in width. Th architects have given sympathetic effe to their clients' ideas, and by artist grouping and by variety of parts hav epitomized the style in a rhythmic an pleasing manner. They have also show how the whole group can be built up-t date in the matter of fire-resisting co struction, fire protection and escape, ve tilation, sanitation, lighting, heating, an comfort for the working staff.

The external timber framing is to b of teak, and that of the interior of oak, large balks. All this timber comes fro two old "three-decker" men-of-war, no being taken to pieces. One of these about the same length and height as th Argyll Place elevation. Some of th timbers in the ships are 17 in. squar but the bulk to be used will be 15 in. an 12 in. square balks with adzed face The oak floors throughout are from th ships' decks. The external timber is a mortised, tenoned, and pegged, and filled in and backed with brickwork. many places there are double or cavi walls. The roofs next the streets a covered with tiles, and the pent roof the main entrance with stone. It shou be added, in these days when so much h been said about the necessity for high buildings, that instead of the 80 height of external walls permitted by t London Building Act, the height of th building is 46 ft.

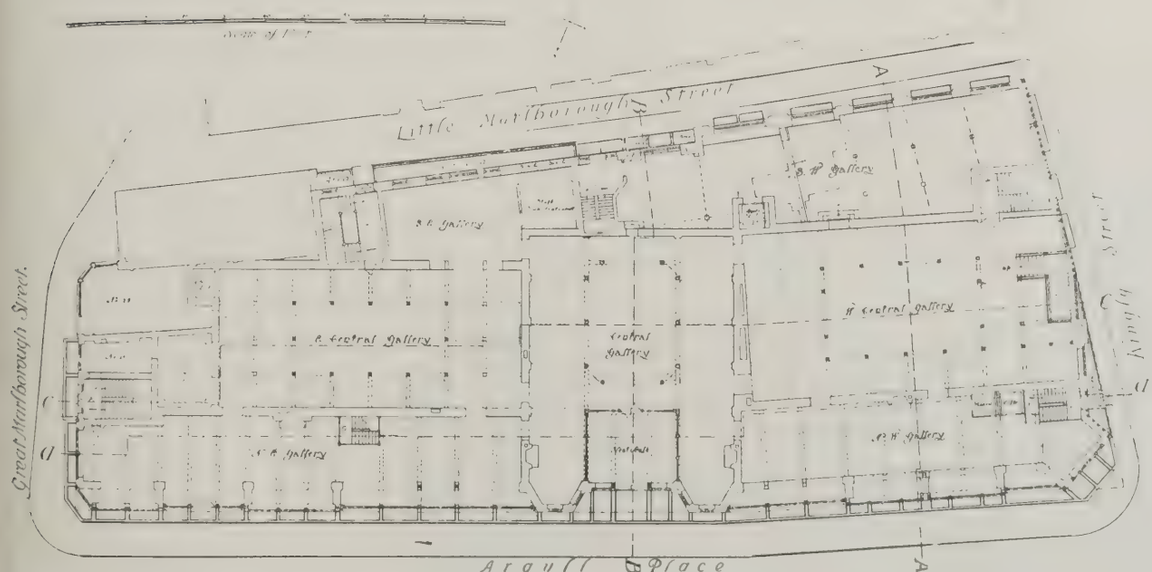
As a matter of town planning the ma entrance is opposite Argyll Street, an the triple gables carried on stone towe will be visible from Oxford Street. will be seen by the plan, this entrance the outer edge of the pent roof is 30 wide. It opens into a large vestibu enclosed by a glazed oak screen, and fro this access is given to eight five-stori galleries (divided by party walls), tho on the north and south being lighted fro the roads, and those in the centre from t sky. In addition there is an extensi basement. The north galleries on t fourth floor are about 260 ft. long, a will have oak open-timbered roofs.

The north and east central galleries the basement; the whole of the grour first, and second floors; the north a part of one central gallery on the four floor, will be showrooms, and there a about a dozen trying-on rooms. T remainder of the building consists offices, workrooms, four dining-halls, t kitchens, rest-room, cloak-room, grou of lavatories, etc.

Building operations are to commen in June, and it is hoped that the Rege Street block will be rebuilt as soon as t Argyll Place group can be made rea for use.



FIRST FLOOR PLAN.



GROUND FLOOR PLAN

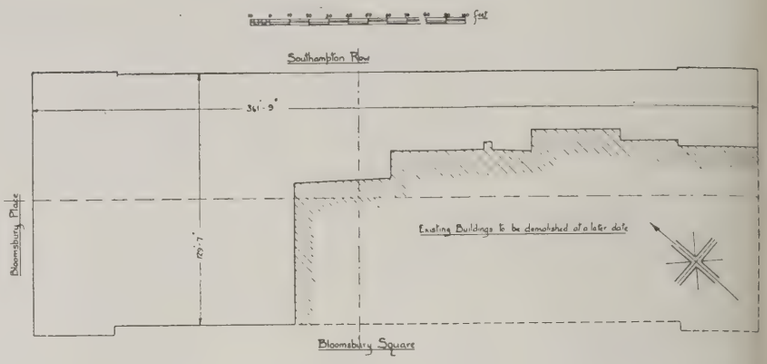
TUDOR HOUSE, ARGYLL PLACE, LONDON, FOR LIBERTY & CO., LTD.
EDWIN T. HALL AND E. STANLEY HALL, M.A., FF.R.I.B.A., ARCHITECTS.

Construction. 25.—New Offices for the Liverpool Victoria Friendly Society

OF the many profound changes in London during the last twenty years, perhaps none is so striking as that produced by the development of the modern type of commercial building. Londoners, after an absence of comparatively few years, always express amazement at the rapid growth of those great piles of offices which in many cases alter completely the appearance of a once familiar locality. In mediæval times magnificent halls were erected by the great corporations as monuments to their power and dignity; the design and proportions of these halls being governed by the main purpose for which they were built, viz., the staging of splendid functions and banquets—the outstanding features in the social life of this period.

But in this age of great commercial undertakings, the needs of business expansion, of greater accommodation, and of more efficient organization, in general determine the necessity of building vast hives of industry, in which the comfort of the worker is studied as an indispensable condition of commercial efficiency. In buildings of this type it is possible to provide a very effective architectural treatment without detriment to business requirements. With the modern methods of building now at his disposal the architect is able generally to achieve a design which permits of both these requirements being combined satisfactorily.

The Liverpool Victoria Friendly Society, whose new offices in Southampton Row are now in course of construction, have realized fully the importance of these considerations; and their island site, covering over an acre of ground, between Bloomsbury Square and Southampton Row, lends itself admirably to the erection of a structure which should rank high amongst the great buildings of London. This new building is being erected to provide a central administration office for an institution devoted almost entirely to industrial insurance, and with a membership averaging one person in twelve of the total population of the British Isles.



KEY PLAN OF SITE.

The key-plan shows the extent of the site. The portion of the building covering the north-east section will be erected first, and the remainder will be completed after expiry of the leases of the existing row of houses and offices.

Some of the conditions which have determined the broad lines of the design are the provision of wide floor spaces, unbroken by intermediate columns, and capable of being sub-divided and rearranged as the needs of the business demand; the addition of large underpavement vaults for storage; and the possibility in the event of a relaxation of the building regulations of three more stories being built at a later date. These and other considerations have led to t adoption of the steel-framed method construction. This method is becomi increasingly popular in London, a justifiably so; for with the limited beari pressure allowable on London blue cl weight considerations are of great imp tance, and with steel framing a very lig and strong design can be evolved.

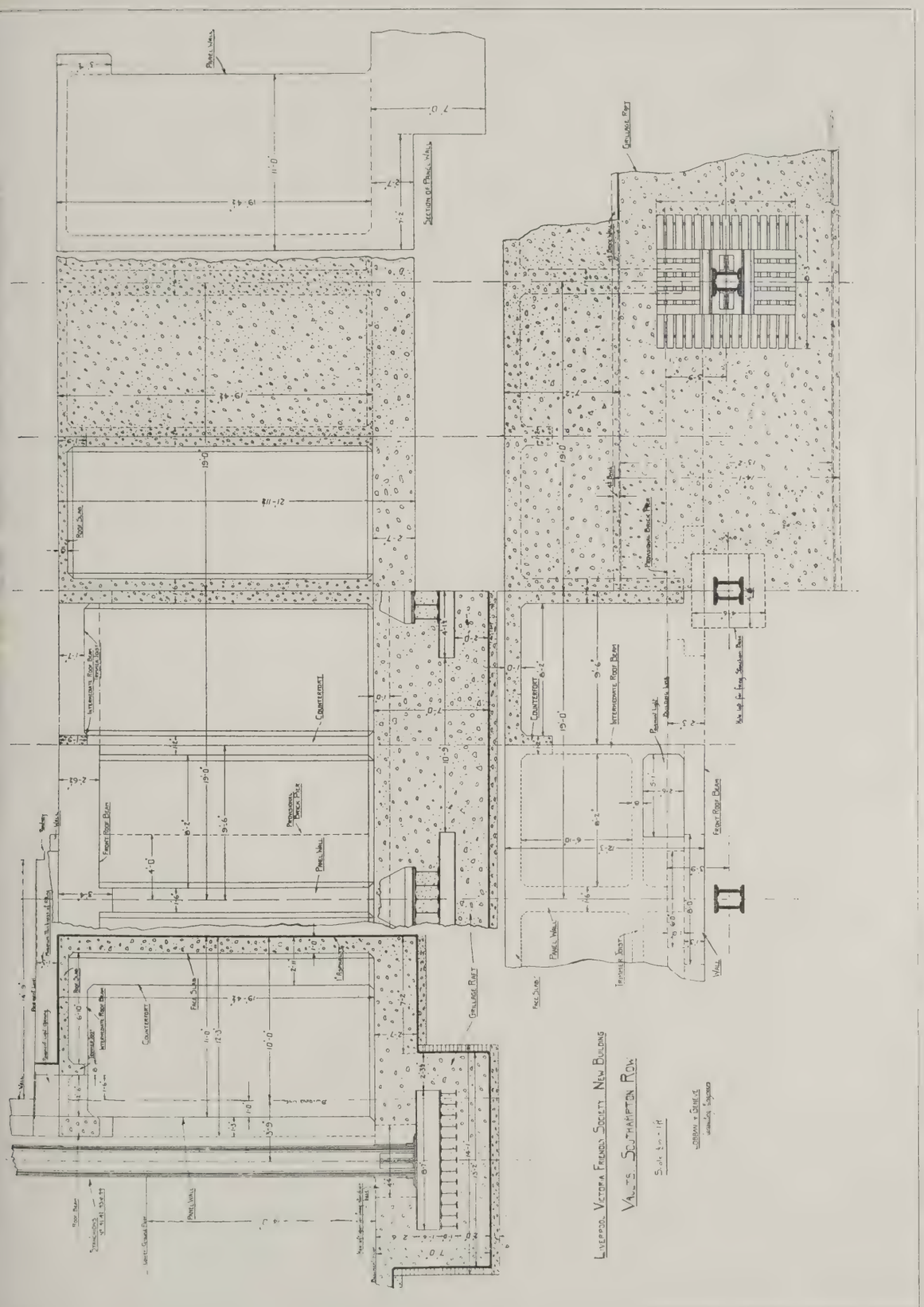
Arrangements have been made publish at intervals in the JOURNAL series of short articles (of which t present is the first) dealing with the ma interesting features embodied in the desi

At this stage of the work the m interest centres naturally in the foun tions, vaults, and retaining walls. Th are built throughout in reinforced c crete, the vaults being integral with outer foundations, which are continu along the four sides of the building. T type of construction leads to a very lig and yet very rigid design, the combi thrust due to the stanchion loads and lateral thrust of the earth being tra mitted directly to the blue clay on wh the whole building will be carried. C siderable attention has been paid to distribution of the pressure on the ba this being kept as uniform as possible order to minimize the danger of uneq settlements.

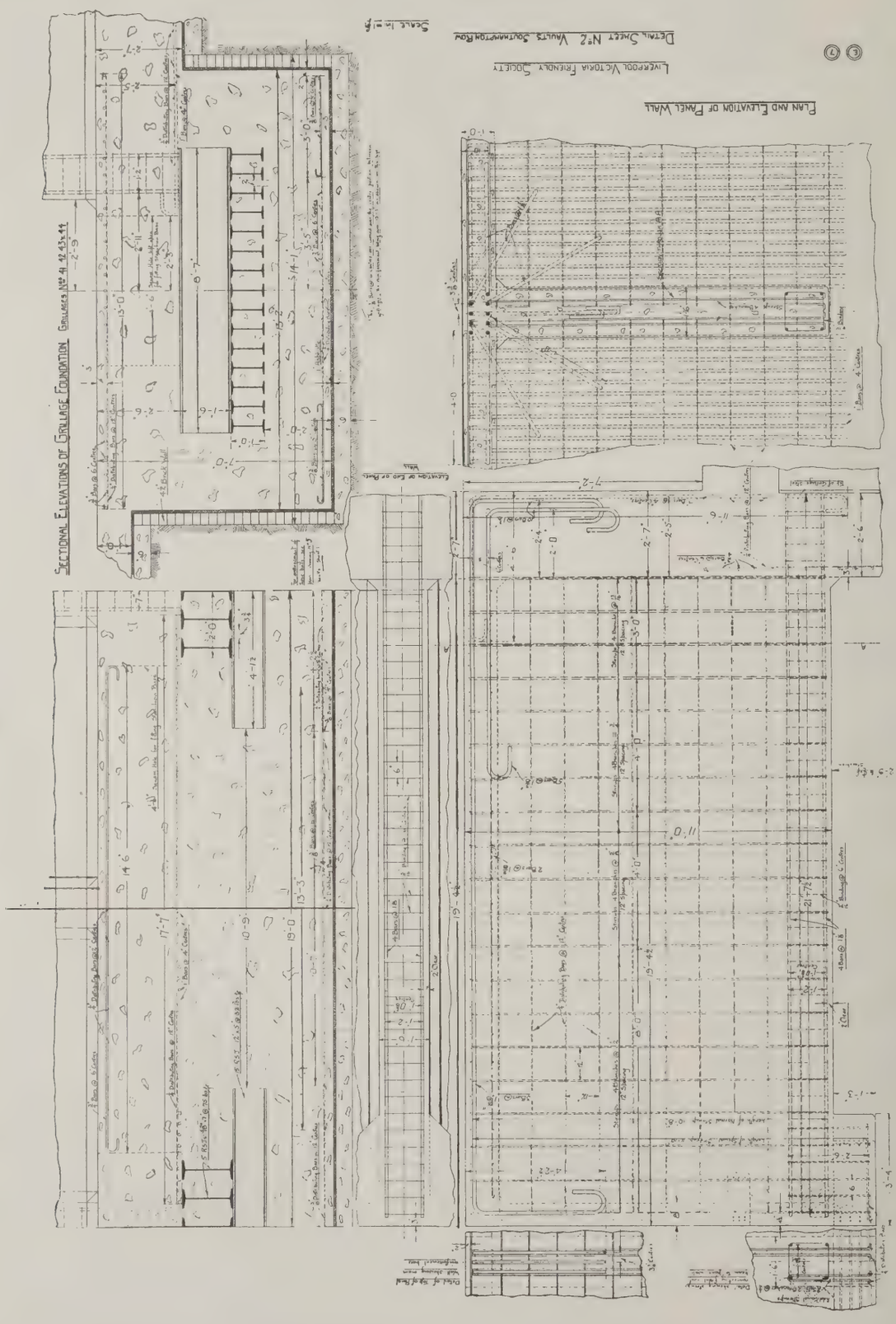
As the level of the basement floor approximately 2 ft. below the natu underground water level, some trou is being experienced in keeping out water whilst the concreting of the foun tion is proceeding. Pumps are at w continuously, and the question of re forcing the basement floor against upward water pressure gives rise to seve very interesting problems. The us layer of 1 in. of asphalt will be carr under the basement floor, the outer l of foundations, and at the back of vaults, thus forming a complete wat proof tank underneath the building.

The illustration on the opposite p shows a general arrangement of vaults in Southampton Row, a the general design adopted. T vaults are divided into compartme by panels spaced 19 ft. apart, int mediate counterforts being also p vided. They are very deep along t

DETAIL OF SHORING IN FOUNDATIONS.



NEW OFFICES OF THE LIVERPOOL VICTORIA FRIENDLY SOCIETY, SOUTHAMPTON ROW, LONDON: DETAILS OF VAULTS.
C. W. LONG, F.R.I.B.A., ARCHITECT, C. H. LOBBAN, B.Sc., A.M.Inst.C.E., AND C. A. GENEVE, B.Sc., A.M.I.Mech.E., CONSULTING ENGINEERS



NEW OFFICES OF THE LIVERPOOL VICTORIA FRIENDLY SOCIETY, SOUTHAMPTON ROW, LONDON: DETAILS OF PANEL WALL AND REINFORCEMENT.
C. W. LONG, F.R.I.B.A., ARCHITECT. C. H. LOBBAN, B.Sc., A.M.Inst.C.E., AND C. A. GENEVE, B.Sc., A.M.I.Mech.E., CONSULTING ENGINEERS.

de of the building, as they are intended r the storage of books and documents, nd a complete system of racks with termediate galleries will be erected. On the opposite page is a reproduction the working drawing for one of the panels, hich shows details of the reinforcement. The vaults in Bloomsbury Square are esigned for the storage of coal. The oiler plant for the heating installation ill be on this side of the building, and al chutes are being incorporated in the or, through which bunkers in the boiler use will be fed directly. An open area between the vaults and the building will allow direct daylight to reach the lower ground floor and the basement floor.

With regard to the corner of the building adjoining Southampton Row and Bloomsbury Place, the combination of the two horizontal thrusts due to earth pressure with the vertical stanchion and other loads necessitated a considerable number of adjustments in the shape of the foundation at this point, and a reinforced concrete raft was adopted finally in order to distribute the pressure uniformly on the clay.

The architect is Mr. C. W. Long, F.R.I.B.A., of London and Cambridge, and the consulting engineers for the steel and reinforced concrete work are Messrs. C. H. Lobban, B.Sc., A.M.Inst.C.E., and C. A. Geneve, B.Sc., A.M.I.Mech.E., both of the University of London (King's College). Messrs. James Carmichael (Contractors), Ltd., are the general contractors, and Messrs, Dorman Long & Co., Ltd., are supplying the structural steelwork.

Glicenstein at the Greatorex Galleries

THOUGH Rembrandt realized superbly the spiritual reactions of life, he was blunt towards its more plicate physical aspects. He had no nsuous enjoyment of its movements, ctuations, and evanescence. His pic-res are a series of terrific sunsets. ey consummate all activities, all pirations, all enthusiasms, in a mood of d reverie and repose. For this reason, en he tried his hand at expressing nsitory life, he made one serious blun-r; he drew figures in shifting transitory titudes without realizing that what had to express was not so much the titudes of the figures as the force of ich each attitude was the manifesta-n. To prove this it is only necessary to take his most famous picture, the "Night Watch," in which each of the many figures is suspended in the act of movement—an act of movement of which it may be said that the artist discovers the action without the movement. What has he done? He has forgotten that action must be of itself a manifestation of a more fundamental activity, and has crystallized certain attitudes, such as the attitude of a man walking, without suggesting the primal energy which is at the source of his movement.

Botticelli, on the other hand (to make rather a big jump), has a mastery of the physical and sensuous side of life which is profound; his pleasure lying very purely in the intrinsic motions of limbs, waves, and draperies. "Tobit and the Archangels" is a perfect example of this aspect of his genius, for here it is possible, nay compulsory, to visualize the motions preceding and following the actual dispositions of the figures in the painting, so that one experiences that sensation of flow which is essential to the comprehension of movement. In other words, Botticelli has perceived that to express forms in motion it is more necessary that the hidden current of life animating those forms should be revealed, than that the forms themselves should be realized immaculately.

THE PROPHET: BY HENRY GLICENSTEIN.

In turning now to the sculpture of Glicenstein, which has lately been exhibited at the Greatorex Galleries in Grafton Street, one discovers with something of a shock that the creations of this widely famed artist strike one as ineffectual, tiresome, and irritating, despite the fact that they are powerfully executed by one who is evidently the master of his medium. I am sure that the reason lies here; that Glicenstein is an artist who delights to interpret emotions and expressions of thought, who is essentially the recorder of expressions—introspective—and essentially immobile, and unsensitive as Rembrandt was to the sensuous movements of life, the transient volutions, the floating draperies. Yet by some curious coincidence of mischance this very sculptor has chosen to devote himself to realizing not the expressions, but the movements of physical life; to realizing the movements of runners, the movements of arms, of legs, of necks, of all purely physical movements. Nearly every work of Glicenstein's exhibited here is either an interpretation of actual or suspended movement. The result is such as must bring tears to the eyes.

"The Prophet," which is illustrated here, gives some idea of the result of Glicenstein's working, yet this happens to be one of the least dynamic of his creations. You get in this striking piece of sculpture the strained neck, the attitude of attention, the gaze bent on the distance in the ardour of thought—no actual movement, but a suggestion of movement, and a suspended activity as of one who listens. One would say that the pose is practically perfect, the composition being most cunning (the arms following the lines of the legs); yet, nevertheless, it is impossible to free oneself of a sensation of ineffectuality and impotency when studying this figure, simply because the energy implied by the tension of the limbs has not been expressed by the artist. He has not realized that this tension is an expression of energy; and as a result one's neck aches in sympathy with the poor prophet who appears to have been "born stretching," without power or life. "The Runner" is an even more doleful exhibition, and "The Sun Worshipper" appears to be nothing more than a study from the nude.

Nevertheless, much of his work is undeniably powerful. For power nothing could beat the ferocious animal which glares at one in the entrance to the Galleries; and that there is more than this in his work is displayed at least by his "Ruth and Boaz," which has the lyrical value of a piece of Shelley. One exhibition, however, cannot adequately represent such an artist's work. No final opinion of Glicenstein's as an artist will be obtained until his sculpture becomes a more familiar feature in English galleries.

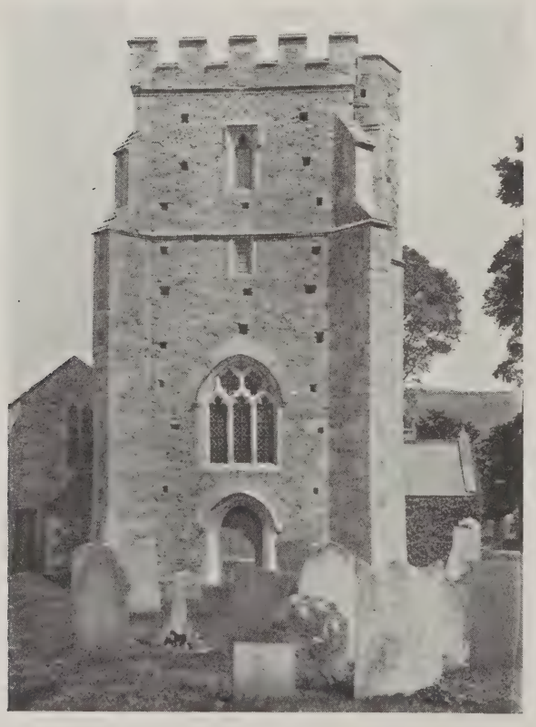
H. DE C

A Pictorial Review

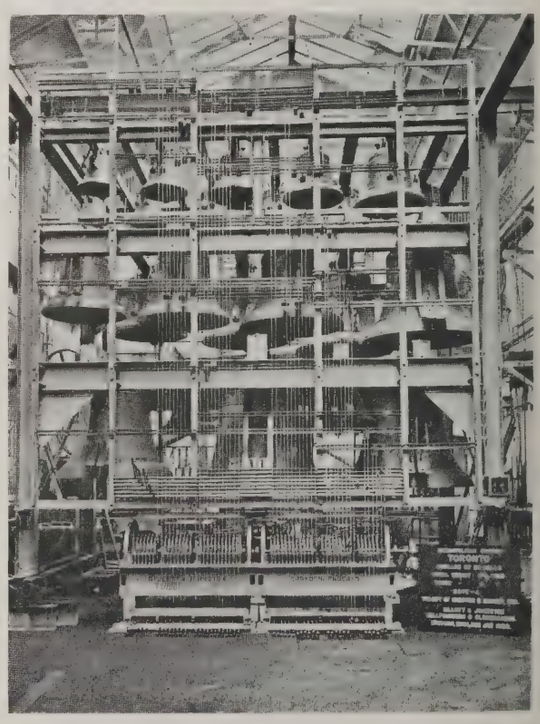
Illustrations of Current, Practical, or Curious Interest

These pages of illustrations are intended to contain both architectural "discoveries" and comments upon matters of architectural importance. The Editors cordially invite contributions. These should be accompanied by short descriptive notes upon the points of interest involved.

The above two views display in a striking way the commanding influence which locality exerts upon architecture. That on the left depicts two small houses in Briggate, Knaresborough, and the other, two cottages at Axmouth, Devon. It will be seen that the windows in each case are identical, the dates being the same, yet the difference in character is enormous. The pent roofs covering the shallow bay-window and doorway make a picturesque feature of the Axmouth cottages.



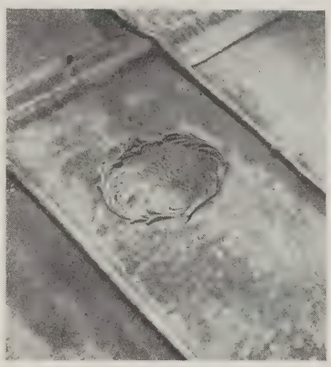
An Exeter student is much puzzled over the holes which the builders left in the masonry of the tower of Seaton Church. They appear to have lintels and cills of stone, which in his opinion implies that they were not used as putlog holes.



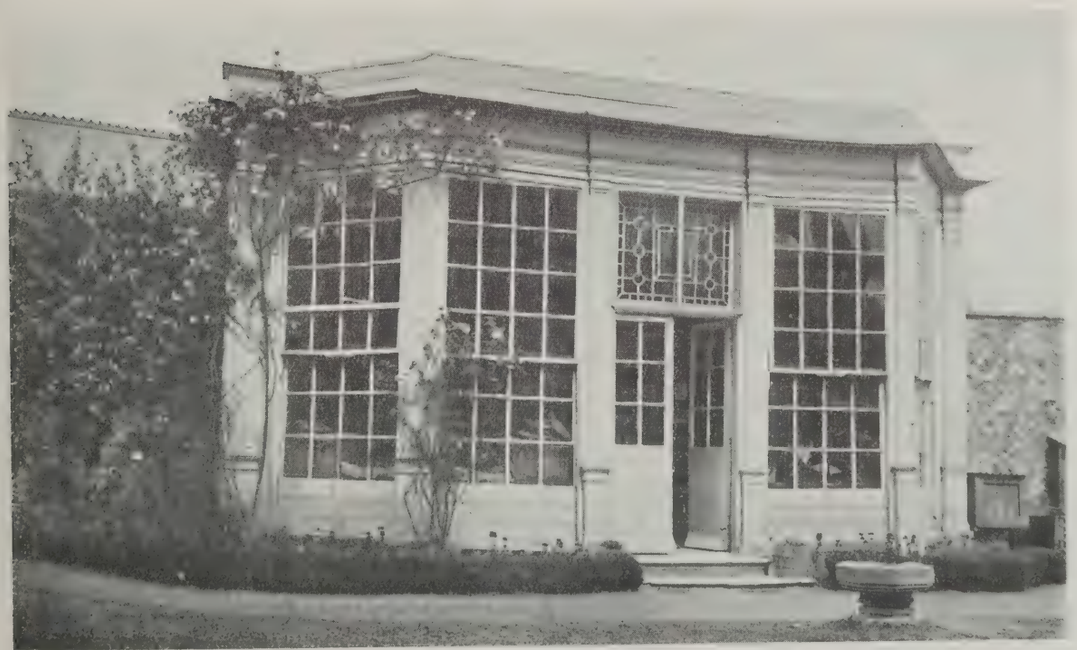
A twenty-three bell carillon is now being installed in the Metropolitan Church, Toronto. The photo gives some idea of its size and of the difficulties of instalment. The carillon has been executed by an English firm, Messrs. Gillett and Johnston, of Croydon, and its installation is being supervised by Canadian architects.

On the site of some demolished buildings on the south side of St. Helen's Place, Bishopsgate Street, the foundations of an old Saxon Church and of an earlier building, thought to be Roman, have been revealed. There is also the old St. Helen's Monastery, of which this photo shows "The Nuns' Squint," through which the nuns could gaze at the altar of St. Helen's Church. This is thought to be unique in England.

From Beer quarries in Devon the sandstone used for the construction of Exeter Cathedral was extracted. The three entrances are shown. In the vicinity is a disused and exhausted quarry, once worked during the Roman occupation. The Beer quarries are very extensive.



On the lead roof of the tower of Axmouth Church, near Seaton, there is what a correspondent regards as an instance of a plumber signing his work. The "C.W." beneath the names in the cartouche is an obvious abbreviation for "Churchwardens," and the "P" after "C. Chick" may fairly be interpreted as "Plumber."



This Georgian summer-house provides an excellent motif for a modern garden-house. The detail is delightful, and the whole work is of a type by no means common. It was discovered in the garden of a private house at Colyton in Devonshire.

A New Building Stone

ONE should, perhaps, explain that the word "new," as used in the title of this article, might more accurately be altered to "little known," the fact being that, because every corner of this ancient country of ours has long ago been searched for building stone, it would be difficult to say of any one of them that it was strictly and literally new. But although it is obvious that a stone which has proved fit for building, and has thus won for itself a local reputation, is at least not new among those who know it and use it, it is quite possible for the same stone, if transported within the radius of more important markets, to appear a discovery in its new environment.

This latter observation might well apply to the particular variety of Somersetshire stone known as Bryscom stone—which the writer has made the subject of these notes—for the reason that the constructional and æsthetic qualities which it possesses, while duly acknowledged within the limits of the county of Somersetshire, are certainly deserving of a far more extensive appreciation than now seems to be the case.

Attention was first directed to it during a recent holiday spent at Cheddar, a few miles south-east of which is the village of Rodney Stoke. It was here that a particularly well-designed inn (see Fig. 1), recently built on the high road to Wells, attracted the writer's notice. The building is as noteworthy for its rural charm as for the artistic character of the random walling employed by its architect, the late Mr. J. Spire, of Glastonbury.

It appeared on inquiry that the stone came from the Bryscom quarries at Draycott—a short mile distant—and a visit to them followed. Here one was able to watch the process of quarrying the stone in actual operation, and obtain from the resident manager some account of the history of the quarries.

These are situated at an altitude of about 100 ft. above the famous Cheddar Valley, through which a branch of the Great Western Railway runs between Wells and Yatton.

Draycott Station is within five minutes' walk of the quarries, and it is downhill all the way, which greatly facilitates the transport of the material.

It is not inappropriate to mention here that the Great Western Railway Company made a choice of Bryscom stone for the construction of nearly all the station buildings (as well as a number of bridges) along the Cheddar Valley branch line, which was projected and laid down nearly sixty years ago.

It would appear that as far back as the first quarter of the eighteenth century stone from Draycott was used for metalling the more important roads in this part of Somersetshire. The following extract from "Lord Tony's Wife," by Baroness Orczy, bears directly on the matter, and will be read with no little interest by those who are familiar with the neighbourhood.

"The road along which the two cavaliers were riding was unspeakably lonely and desolate—an offshoot from the main Bath to Weston road. It had been quite a good secondary road once. The accounts of the county administration under date 1725 go to prove that it was completed in that year at considerable expense, and with stone brought over for the purpose all the way from Draycott quarries, and for twenty years after that a coach used to ply along it betwee Chelwood and Redhill, as well as two c three carriers, and, of course, there wa all the traffic in connection with th Stanton markets and the Norton fairs."

While, as might be expected, on found that Bryscom stone has been em ployed for building the entire village o Draycott, besides many important house in the vicinity, very interesting instance of its use as monoliths are also to be see on the countryside, where sturdy post and twin field-posts are to be met wit for miles round about. The excellen condition in which the stones are foun to be, after decades of exposure, is con clusive testimony of its weather-resistin properties.

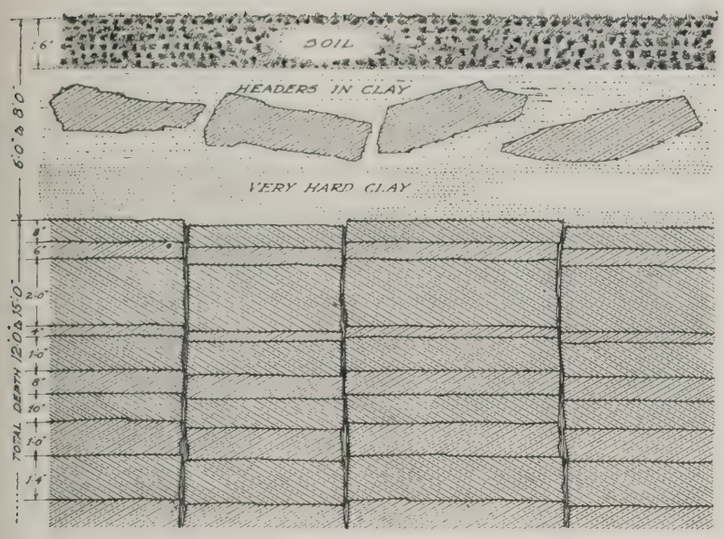
It may be also mentioned that some o the villagers even use single lengths o the stone for clothes posts, for whic purpose they appear to be well adapted.

A peculiarly local application of it— and one which has not been without in fluence on the character of the architec ture in the neighbourhood—is its em ployment for lintels over cartway en trances to farm and other buildings. A example—which is 12 ft. in length—wil be noticed in the illustration (Fig. 2 showing one of the original structure erected for the use of the quarrymen ove half a century ago. Incidentally the viev clearly indicates not only the admirabl state of preservation of the stone, but th picturesque appearance of the rubbl used in the walling, which has now as sumed the warm tone of grey.

A sample of Bryscom stone was re cently submitted to Mr. R. H. Rastall University Lecturer on Economic Geolog at the Sedgwick Museum, Cambridge who reports : "The specimens of Bryscon

1. THE RODNEY STOKE INN, SOMERSETSHIRE. THE LATE J. SPIRE, ARCHITECT.

2. A BUILDING ERECTED AT DRAYCOTT OVER HALF A CENTURY AGO.



3.—VERTICAL SECTION SHOWING GEOLOGICAL FORMATION OF THE QUARRY.

...e submitted for examination are ...ical examples of the dolomitic con...nerate of the Mendip area. This ...nation was laid down in Upper Trias ...uper) times as a shore deposit or ...aerial breccia on the slopes of an ...ient range of hills formed of uplifted ...oniferous strata. It was subse...ntly cemented and solidified during ...mergence beneath the waters of an ...nd sea, the cement consisting largely ...alcite and dolomite.

The rock consists of angular, sub...ular, and rounded pebbles of varying ..., almost exclusively composed of car...iferous limestone of different types ...a its characteristic fossils, corals, ...oids, etc. There are no indigenous ...ils peculiar to this deposit. Many of ... limestone pebbles are more or less ...omitized, and some are stained red by ... compounds. The red cementing ...erial contains, besides crystalline cal... and dolomite, a considerable quan... of red ferruginous muddy material, ...ch, no doubt, was originally fine wind...vn dust, afterwards hardened by in...ation of iron, calcium, and magnesium ...onites in solution. . . The chief ...stituents are carbonates of lime and ...gnesia, with smaller amounts of ferric ...le, alumina, and silica.

The rock, as a whole, is capable of ...ng a good polish and is a handsome ...amental stone."

When newly quarried the stone has a ...dominant shade of red, with which ...a light and dark grey markings are ...rmingled. In course of time, and ...r years of exposure, most of the red ...ses away, and the surface weathers ...n to a general warm tone of reddish ...r.

These differences in colour were well ...mplified in the quarry building and ...inn, between the erection of which a ...od of over half a century has elapsed.

The deposit of stone extends for a dis...ce of about half a mile along the hill..., from which it "outcrops" at inter..., and the seam is of varying widths, ...ome places not exceeding a hundred ...ts.

The area of this particular quarry was ...inally about two acres. Of this ...ter more than one-half has already been extracted, and the top soil having been redeposited, it now forms an apple orchard. The beds of rock remaining to be quarried are about 250 ft. by 130 ft., and the quarry yard in front of the beds cover about 1,200 square yards. Other and more important deposits of this stone have been secured by the present owners of the quarry, and material is in sight sufficient to give supplies for at least the next one hundred years, even allowing for an enormous increase in the present demand.

It is not till a depth of from 6 ft. to 8 ft. beneath the level of the soil is reached that the best quality of stone is found, and this is solid for a further 12 ft. or 15 ft., at which level it ceases. The strata, which lie horizontally, vary in thickness from 4 in. to 2 ft. or even 2 ft. 6 in.

At the back of this seam the hills of grey mountain limestone—which is locally quarried for road metal—rise to a height of over 700 ft.

Several interesting facts are to be gathered from an examination of the diagram (see Fig. 3) representing a vertical section through the quarry.

It will be observed that between the soil and the layer of hard clay lying beneath it, large detached stones of irregular shape are found, which are termed "headers."

These "headers" are of little use, except for breaking up for road metal. The stone is hard, but the fragments of which it is made up are not bonded together in the same way as those in the horizontal beds, and therefore will not serve for architectural or similar purposes.

Attention is also drawn to the vertical gully joints, which separate the horizontal beds into well-defined masses. The diagram shows that the several strata in each of these masses retain their respective depths more or less uniformly.

A general view of this "open" quarry (see Fig. 4) indicates how simple the operation of quarrying becomes when the face is of limited depth, and the stone lies in clearly marked beds. The illustration also shows a three-ton derrick crane for hoisting the quarried material into convenient positions.

When the overburden is removed it is re-deposited over the area from which the stone has been quarried, after which the land quickly returns to cultivation. Thus the process of quarrying virtually results in the general lowering of the ground level.

Owing to the clearly marked divisions between the strata, blasting is unnecessary, and all the stone is dislodged by leverage, after the beds or sheets have been divided up into blocks of a convenient size by "Flottman" drills operated by means of compressed air. One such drill is seen in use in Fig 5, and stones which have been so broken up are shown in Fig. 6. There is an extensive airpipe installation throughout the works, and the motive power for compressing the air is derived from a Crossley engine and gas plant.

Bryscom stone is marketed in a variety of forms, which include random rubble, coursed walling stones, pavings, base stones, templates, hearths, chimney-pieces, landings, steps, cills, and quoins. At the time these notes were written the quarry masons were actively employed in turning out a number of rusticated war memorials in addition to the normal work of grading and dressing the stone for ordinary building purposes

Although it is not sought to quarry

4.—A VIEW IN THE QUARRY.

particularly large blocks of this material, they may without difficulty be extracted up to 15 ft. in length.

The square posts supporting the verandah roof of the Rodney Stoke Inn are 7 ft. 6 in. high, and measure 14 in. across. They are actually in three pieces, but if the architect had desired it, they could easily have been supplied in single lengths.

The products of the Bryscom quarries may be alternatively used either as a building stone or as a marble.

Bryscom marble derives its fine markings from its brecciated structure. It is extremely sound, takes a high polish, and in general appearance somewhat resembles the Belgian Brown Brocatella and Waulsort marbles.

From the ease with which it is quarried and the relatively low cost of working it, Bryscom may be described as one of the cheapest marbles on the market. The material when used as a marble is especially suitable for shop-fronts, as it retains its polish longer than many of the better known marbles. It is also equally well adapted for plinths, dados, columns, and decorative work in general, and can be supplied in any thickness of sawn slabs as well as in blocks.

In the course of a visit to Wells Cathedral the author of this article was fortunate enough to come across an instance of the use of Bryscom marble for two pairs of detached shafts about 12 ft. high, 6 in. diameter, and each in a single piece, in the westernmost wallpiers of the nave.

Two of these are considered to belong to the original work, while the remaining pair are known to have been given by the late Canon Meade about sixty years ago. In connection with these four columns it is interesting to record that at a height of about 4 ft. 6 in. each of them retains a patch of the original polish, the rest of which has disappeared. The exact reason for this is not very clear, but for some cause of another, visitors to the fabric pass their hands over these spots and so keep the polish intact.

Since these observations were made the columns have been entirely repolished, and they now appear in all the richness of their original beauty.

Besides the shafts in Wells Cathedral there is in Wedmore Church an interesting sixteenth-century mural monument made of the material. To this tablet were originally attached two brass plates which are now fixed to the walls above it. One of these bears the following inscription :—

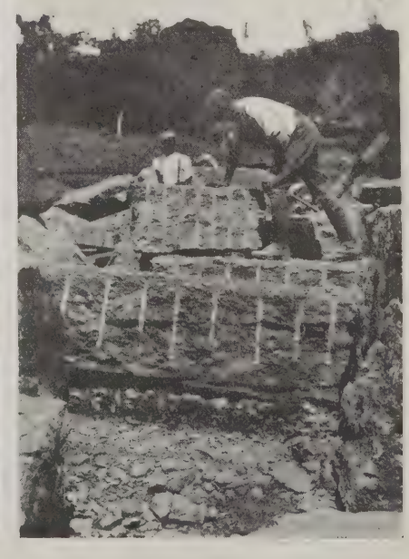
"Sacred to the memorie of Captaine Thomas Hodges, in the County of Somerset Esq. Who at the Siege of Antwerpe about 1583 with unconquered courage wonne two ensignes from the enemy, where receiving his last wound, he gave three legacyes, his soul to his Lord Jesus, his body to be lodged in Flemish earth, his heart to be sent to his dear wife in England.

"Here lyes his wounded heart for whome one Kingdome was two small a roome. Two Kingdoms therefore have thought good to part so stout a body, so brave a heart."

There was formerly shown at the Geological Museum in Jermyn Street a polished table-top of Bryscom marble measuring 5 ft. in diameter, and 3 in. in thickness. This, however, is no longer on view, and has now been put into store.

[The above description of the Bryscom quarries has been sent us by an architect who has contributed technical articles from time to time.—Editors A.J.]

5.—"FLOTTMAN" DRILL IN OPERATION.



6.—STONES BROKEN BY DRILL.

New Inventions

Latest Patent Applications.

10391.—Ambrose, J. G.—Cavity walls. April 11.

10140.—Hartgrove, F.—Concrete block waterproof dressing. April 10.

10196.—Thomas, A. O.—Building-tile. April 10.

10254.—Walker, W.—Means for illumination of work in situ. April 11.

10114.—Westley, J. W.—Sliding casement windows. April 10.

Specifications Published.

177593.—Barker, J. J. S.—Hollow building-blocks.

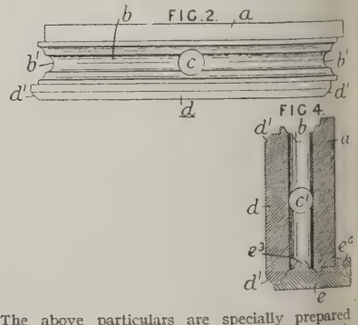
157725.—Iversen, P. E.—Insulating outer walls.

168847.—Winkler, K.—Process for rendering cement, mortar, concrete, and the like, suitable for use in stopping up incursions of water or for waterproofing or other similar purposes.

177709.—Rigby, J. S.—Appliance for use in laying mortar or the like in masonry.

Abstract Published.

175696.—Building Blocks.—Keely, C. and Belvoir, T. Beevers, Manor Cottage, Warden, Isle of Sheppey, Kent.—A concrete building-block comprises at least three elements *a*, *b*, *d* stepped relatively both horizontally and vertically. Grooves *b'* of semi-circular, scalloped, or star-shaped cross-section are provided along all the edges in one or more of the sections. Vertical and horizontal passages *c*, *c'* are provided through the block joining the grooves in the edges. When in position, the vertical passages in one row of blocks coincide with the grooves in the edges of two adjacent blocks in the rows above and below. Shaped rods may be passed through these passages. The front face *d* may have chamfered edges *d'*. The foundation block *e*, Fig. 4, is of greater width than the wall block, and is shaped to receive the lower horizontal surface, and may have a rib e^3 to engage the groove in the lower edge of the block. Flanges e^4 may be provided at both the front and the rear. A damp course may be interposed between the foundation and the blocks above.



The above particulars are specially prepared for Messrs. Rayner & Co., Registered Patent Agents, 5 Chancery Lane, London, from whom readers of the Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specification and forward on post free for the official price of 1/- each.

The Week's News

New Bacon Factory.

Redhill has been selected as the site of a new bacon factory for the counties of ...rt, Surrey, and Sussex.

Housing at Depwade.

Depwade Rural District Council are applying to the Ministry of Health for sanction to a loan of £6,500 for housing.

Holborn War Memorial.

Holborn is considering a proposal for the erection of shops and dwellings as a war memorial and as a means of providing work.

Welwyn Garden City.

At Welwyn Garden City over 250 new houses are occupied or approaching completion, and 100 more are either in course of erection or will be shortly commenced.

Guildhall Art Gallery.

The Corporation of London have decided to expend £1,728 on converting premises in Guildhall Yard, formerly occupied by the Commissioners of Taxes, into an extension of the Art Gallery.

A National War Memorial?

Speaking at the Royal Academy Banquet, Sir Aston Webb, P.R.A., observed that although we had the Cenotaph and the grave of the Unknown Warrior, we had no National War Memorial.

Houses at £715 per Pair.

Mr. Henry E. Farmer, architect to the Ferley Hill U.D.C. reports that a tender for a popular type of house for the working classes at £715 per pair complete, has been accepted.

New Coast Road Proposal.

The question of the formation of a new road between Newcastle and the coast has been discussed at a meeting by the joint committee appointed by Tyneside public authorities to consider the project. No decision was arrived at.

40 *More Houses for Bath.*

For the erection of forty further houses, semi-parlour type, on the Englishcombe Park site, the Housing Committee have decided to accept a tender at £390 per house, and at £15,600 for the total number of twenty-seven pairs.

The Concrete Institute.

The Council of the Concrete Institute have had under consideration the change of the Institute's title, the new name to be "The Institution of Structural Engineers, Incorporating the Concrete Institute."

Giant Reservoir near London.

A gigantic reservoir now in course of construction at Littleton, near Ashford, Middlesex, will, when completed, be one of the largest in the world. It will cover an area of 800 acres, and will have a capacity of 6,000,000 gallons.

New Wesleyan Church for Carlisle.

The foundation stones of a new combined Wesleyan church and hall, capable of seating a thousand people, and estimated to cost about £27,000, have been laid at Carlisle, on the site of the old church in Fisher Street, built over a century ago.

Westminster Palace Hotel.

A contract has just been signed with a London builder for the reconstruction of the Westminster Palace Hotel, which is to be converted into suites of offices, with shops on the ground floor. The building changed hands last year for a figure said to approach £500,000.

Doncaster Sewerage Scheme.

Doncaster Rural District Council have decided to instruct Messrs. D. Balfour and Son, civil engineers, to prepare an estimate of the cost of alternative schemes for the improvement of the water supply of Askern, where a new colliery village has been built.

Westminster Cathedral Marbles.

The marble work in the retro choir of Westminster Cathedral, which has taken about eight months to put up, has now been completed. The mosaic work in the Tribunes, designed by Mr. R. Anning Bell, R.A., has been executed by Miss Gertrude Martin.

Glasgow War Memorial.

Plans and models of the Glasgow War Memorial are to be submitted to the Corporation for final approval. The design has already gained the approval of a majority of the Executive Committee. Sir John J. Burnet, A.R.A., R.S.A., architect, is having the plans got ready as soon as possible.

Durham City Housing Scheme.

The first of the new houses on the site known as Moorlands, Sherburn Road, under the Durham City housing scheme, have been officially opened. This scheme provides for 60 houses, sixteen of them being of the non-parlour type and forty-four of parlour type. The work is being carried out by Messrs. Byrom, Ltd., of Bury, and the whole of the plans have been prepared and the work superintended by Mr. J. G. Burrell, Licentiate R.I.B.A., architect, Crossgate Chambers, Durham.

Institute of Scottish Architects.

At a meeting of the Council held at Edinburgh, under the chairmanship of Mr. A. G. Heiton, Perth, vice-president, it was decided to make arrangements for sending exhibits from Scotland to the Exhibition of British Architecture proposed to be held in London in November and December next. The Glasgow Chapter are having an exhibition in June and July of the American drawings and plans which have been on view in London. The Annual Convention is to be held at Inverness on June 16.

Proposed Roumanian Pipe Line.

The Municipality of Cluj is endeavouring to arrange for the construction of a pipe line for the supply of natural gas from the Kissarmas district (60 kilometres distant) for domestic, commercial, and industrial purposes in Cluj (previously known as Klausenburg, Kolozsvar). It is possible that the extension of the electric power station and the introduction of an electric tramway system may be combined with this project. Preliminary information may be obtained from the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.

Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to March 31, 1922: permanent houses completed, 6,408; temporary houses completed, 650; reconstructed houses completed, 89; houses built under the private subsidy schemes, 1,503; total, 8,650. In addition there are 12,863 houses under construction, of which 1,819 are being built by private persons with the aid of the Government subsidy. The total amount paid by the Scottish Board of Health in respect of the 1,503 houses completed under the private subsidy schemes is £362,359 13s. 4d.

Edmonton Housing Contractors' Compensation.

The Ministry of Health having reduced the number of houses to be built by the Edmonton Urban District Council from 500 to 223, several claims for compensation by sub-contractors left with considerable quantities of bricks and other material on their hands have been lodged. One sub-contractor claimed £1,680 for bricks he had made but not delivered, and the Ministry have replied, granting him £815 compensation, and allowing him to keep the bricks. Another, who claimed £1,000, has been awarded £500 and allowed to keep his bricks, while a sub-contractor who claimed £2,852 has been allowed £1,426 compensation for the joinery work he had made, which he is told to keep. Other amounts of compensation are £700 and £500. The houses will work out at a cost of about £1,500 each.

More Houses for Sheffield.

In connection with the Sheffield Corporation housing schemes there are either completed or nearing completion on the Stubbin Estate site over 500 dwellings. This is a good portion of the 694 houses (which comprises the original scheme) for which the Ministry of Health gave sanction at the outset. When the construction of this number reached an advanced stage the Corporation applied for further sanction and were given permission to proceed with the erection of a further hundred houses, bringing the total up to about 600. Now, additional land has been acquired, increasing the accommodation to about 770 houses, and it is expected that the Ministry will ultimately give authority for the letting of contracts for the remaining 170 dwellings.

The Need for Houses.

The National Housing and Town Planning Council, in a statement just issued, point out that the substantial arguments put forward in the early part of 1921 in favour of "going slow" in the signing of new tenders for housing schemes have now all been met. The cost of materials has been substantially decreased. The cost of cottage building has fallen to a level which many practical men in the building industry regard as likely to be normal for two or three years

to come, and a fall in the wages of operatives has taken place. There can now be no excuse, the council state, for the refusal to press forward with work on housing schemes of local authorities both in urban and rural areas. Despite all that has been said to the contrary, the council contend that the housing needs of the people are as clamant and urgent to-day as they were three years ago.

Housing at Nottingham.

An interesting record of the development of the Stockhill Lane housing scheme—the first housing scheme to be commenced in the city—has been prepared by Mr. W. R. Gleave, the architect, under whose supervision the work was carried out. Mr. Gleave has also compiled an album of photographs illustrating the estate. The site consists of an area of 32½ acres and the whole of the houses, 206 non-parlour and 148 parlour dwellings, have just been completed and handed over to the City Council. Mr. Gleave mentions that the feature of the lay-out is Stockhill Circus, situated on the highest part of the site, and from which all the principal roads radiate. The most difficult portion of the site (on quick rising ground) has been completed. With a view to obtaining the best artistic effect ten designs have been carried out, and parlour and non-parlour houses have been intermingled and grouped together for picturesque effect.

The Royal Technical College, Glasgow

The students and staff of the Architecture and Building Day and Evening Classes of the Royal Technical College, Glasgow, have paid Saturday afternoon visits to three buildings in course of construction. The first visit was paid to the Kennyhill and Riddrie housing schemes being carried out for Glasgow City Council under the direction of Mr. Peter Fyfe, director of housing. The party was conducted over the works by Mr. Robert W. Horn, A.R.I.B.A., chief architect, Mr. MacGregor, chief clerk-of-works on the housing schemes, and by Messrs. Pringle and Arthur, resident clerks-of-works.

The second visit was paid to the extensive additions now being made to the fever hospital at Knightswood for the Corporation, under the direction of Mr. Thomas Nisbet, C.E., master-of-works and city engineer of Glasgow. The party were conducted by Mr. Tran, clerk-of-works, over the many buildings in progress, some of which are nearing completion.

The third visit was paid to the extension of the Glasgow Municipal Buildings, of which Messrs. Watson, Salmond, and Gray, Glasgow, are the architects. The work was explained by Mr. James H. Gray, A.R.I.B.A. and Mr. Brodie, of the firm of architects, and by Mr. Bowman, the clerk-of-works.

All the visits were largely attended, and the students showed a keen interest in everything they saw. At the close of each visit Professor Gourlay proposed, and the students accorded, a very hearty vote of thanks to those who had granted permission, or acted as guides, or in any other way assisted in making the class visits so valuable and instructive.

Trade and Craft

Bell's United Asbestos Co., Ltd.

The directors of Messrs. Bell's United Asbestos Co., Ltd., have resolved, in view of the audited accounts to December 31, 1921, and after providing for income tax and Corporation profits tax, to recommend to the shareholders at the general meeting, to be held on May 11, the payment of a balance dividend of 1s. 6d. per share on the ordinary shares of the company which, with the interim dividend paid in October last, makes a total distribution of 10 per cent. for the year. The amount to be placed to reserve is £8,000, and the amount to be carried forward is £34,013 9s. 1d.

Change of Address.

Messrs. J. H. Tucker & Co., Ltd., manufacturers of electric light and power accessories, switch and distributing boards and ironclad gear, have moved their London offices and stores to 101 Dean Street, W.1 (close to Frascati's Restaurant, and three doors only from Oxford Street). The company's telephone number remains the same as hitherto, viz., Gerrard 3215. In addition to a greatly increased stock accommodation, the new premises provide showrooms in which a representative display of "Tucker" accessories, ironclad gear, and switchgear is permanently on view. A series of practical demonstrations are also given of the many different controls available by the use of different types of "Tucker" switches. The trade are cordially invited to pay a visit to the new offices.

Architectural Craftsmanship.

Messrs. E. J. and A. T. Bradford, sculptors, carvers, modellers, and craftsmen, have just published a long list of buildings upon which the services of the firm have been engaged in the execution of carving, modelling, fibrous plaster enrichments, etc. The buildings named have been erected from the designs of some of the most prominent architects of the day, and are but a few of the many buildings with which the firm have been connected. Established in 1870 by the late Mr. A. Bradford, the business has since 1908 been the personal practice of Mr. A. T. Bradford, and most of the commissions mentioned have been executed during this period. The firm cordially invite architects to inspect the work carried out, the list of references being particularly useful for this purpose. A visit to the studios, 62a Borough Road, London, S.E.1, is also suggested.

The "Broad" View.

Messrs. Broad & Co., Ltd., whose name is familiar to most architects and builders in the kingdom in connection with the manufacture and supply of practically every standard material required for sanitary and building work, have now ventured into the arena of journalism with a house organ of unusual merit. "The Broad View," of which we have just received the first number, dated April 1922, is described in its sub-title as "an intimate little monthly published by Broad & Co., Ltd., to give news of themselves and their many products." It is a neat and good-looking little pape showing in every caption, paragra and illustration, typographical work much excellence. The present issue dea with several subjects of peculiar intere to the buyer of building materia Cement prices is one, and information given as to Broad's action in resisting th discontinuance of the 2½ per cent. ca discount for monthly settlements. Th company, whose address is 4 Sou Wharf, Paddington, will be pleased mail "The Broad View" to readers this JOURNAL who make applicatio for it.

A Correction

We very much regret that, through a unfortunate misapprehension, we wrongl attributed the paper on "The Architec and the Structural Engineer," which ap peared in our issue for April 19, to D Oscar Faber; the author being Mr. Eri Faber, his brother. We trust that n inconvenience may have been caused t either gentleman through this regrettab mistake.

Coming Events

Wednesday, May 3.

Royal Archæological Institute, Bu lington House, W.—"Church and Colleg of Cotterstock, Northants." By M A. H. Thompson. 4.30 p.m.

Royal Society of Arts, 18 John Stree W.C.2.—"A Paint Material." By M Noel Heaton. 8 p.m.

Thursday, May 4.

Chadwick Public Lectures.—"Rural Re Settlement and Its Relation to Publ Health." By Sir Lawrence Weave 8 p.m.

"Specification" Trade Name Index

Mr. Frederick Chatterton, F.R.I.B.A editor of "Specification," has written to the editor of the "Journal of th Royal Institute of British Architects as follows:—

DEAR SIR,—While much appreciatio Mr. Stephen Ayling's generously e pressed review of "Specification" (1922 which appeared in your issue of March 2 I shall be glad if you will allow me assure your reviewer that with regard the entries in the Trade Name Index, n discrimination whatever is made betwee those firms which take advertising spa and those which do not.

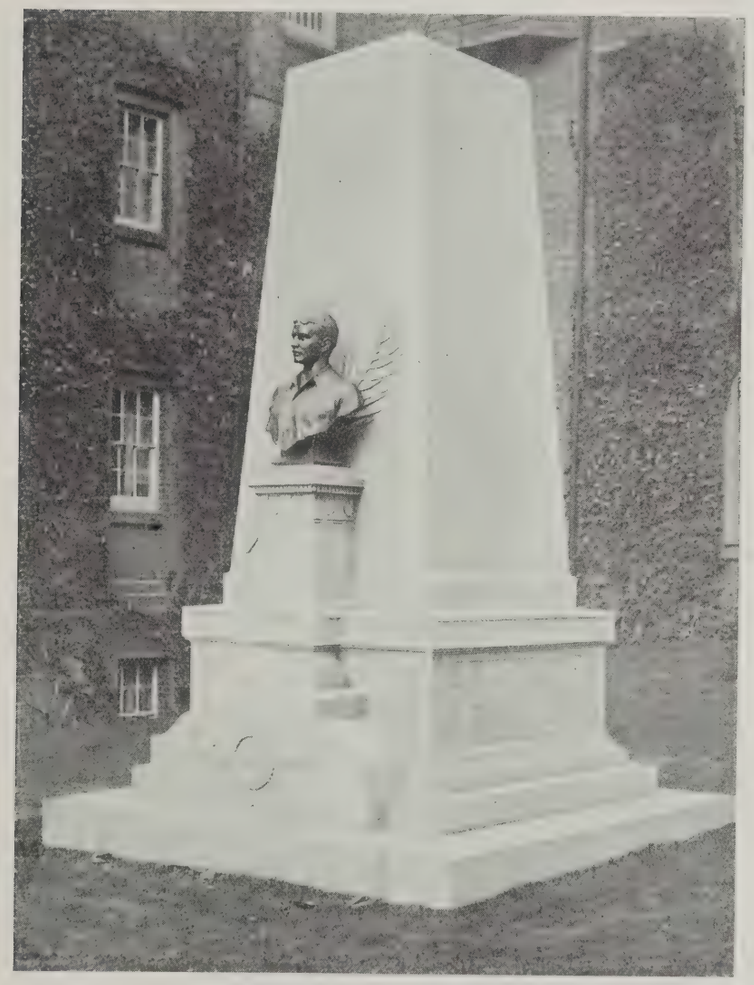
Mr. Ayling's hope that "in futu editions . . . the index will be amplifie and made more complete, independent of the fact that any particular firm do or does not advertise," reveals a mi apprehension which I am sure you w permit me to remove.

The Trade Name Index is compiled f the convenience of architects, and an firm which manufactures a useful com modity bearing a distinctive name no included in its own title, may be repre sented in it.

dnesday, May 10, 1922. Vol. LV. No. 1427

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"



MONUMENT TO RICHARD CORFIELD.
ALLAN G. WYON, SCULPTOR. ADSHEAD AND RAMSEY, FF.R.I.B.A., ARCHITECTS.

This monument to Richard Corfield, of the Camel Corps, who was killed in action in Somaliland in 1913, has been erected at his old school, Marlborough College.

27-29 Tothill Street, Westminster, S.W.1.

Architectural Details. 23.—Staircase at Bolingbroke House, Battersea

The massive character of this staircase, with its thick handrail and newels, obviously indicates the period of the early Renaissance. Bolingbroke himself describes the house in 1740 as "an old and decayed mansion"; and of the remnant left to-day the staircase is the best feature. It is quite intact. We earnestly hope that if this house is to be pulled down the utmost pains will be taken to preserve this fine example,

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esday, May 10, 1922 Volume LV. No. 1427

Selling Our Heritage in Art and Craftsmanship

BRITAIN is to-day more than ever the happy hunting-ground of the American treasure-seeker. Circumstances conspire to make his search successful. The rates of exchange greatly rise his purchasing power, while British owners of treasures are unusually anxious to sell them, ise of the heavy burdens imposed by the war on who before were more likely to buy than to sell, cannot now compete with the wealthy American r, and it therefore follows that art treasures of all that are at all portable are being shipped across the tic with alarming frequency. One trembles for the ate destination of the Hoppner and the Raeburn etched such lavish prices last week-end.

ch of this steady westward trend is observable from ewspaper records of the public sales; but the extent to i our country is being rapidly denuded of its art ares is not thereby fully revealed. Many of them are rivately—even secretly, to avert the outcry, and the sible purchaser at a public sale is as often as not ig as the agent of some plutocratic American, or, at s in the hope of attracting one; so that the evil is even prevalent than on the surface it appears to be.

t is it really an evil in itself, or is it merely symptomatic e financial stress that the hopeful Budget will do to remove by its psychological effect rather than by any antial relief it affords? That our loss is another ry's gain is a common but sophistical form of con-ce; but it advances a pseudo-altruistic view which be applied with equal force to a stolen purse—us mine, 'tis his"—and there can be no doubt that persons whose opinion is at all worth having are ned at the serious injury that is being inflicted on our ry by the increasing exportation of objects of tic value and intrinsic national interest. Commander lpine's reiterated contention in "The Times" and here, that the loss of national art treasures is a heavy ty for our country to suffer for her strenuous efforts war, makes an irresistible appeal to all in whom the of our country is blended with anxiety for her standing arts and crafts.

Commander MacAlpine is to be thanked for his patriotic spirit in taking up the subject with so much vigour persistency; for he feels so keenly about it as to have at the pains to write half a score of letters on it to "The s," strongly advocating State intervention to prevent ystematic exportation of our national art treasures—country's heirlooms," he is fain to call them. To stay lague, he suggests the absolute prohibition of export, ternatively, the imposition of a heavy export duty. Austen Chamberlain is cited as having expressed him-favour of an export duty. Replying to a question by Sir W. Davison in the House of Commons, Mr. berlain expressed the opinion that there is "much to id in favour of such a duty," and added that he would ry glad to consider the suggestion. Mr. Chamberlain is more likely to have spoken as Chancellor of the Exchequer (as he then was) than as art-lover; but the effect will be the same if his successor in Budget-making shows the same inclination, and will take strong measures to prevent the exodus from this country of precious specimens of art and craftsmanship which we ought to desire passionately to keep with us.

Here the pseudo-altruistic argument once again intrudes: "Why should we wish to keep them with us? Surely the love of objects of art should not be narrowly chauvinistic, but broadly cosmopolitan." Cosmopolitan it is, no doubt, in the abstract; but the immediate point is the concrete property in it that can be bought and sold. And where a work has acquired the distinction of a national heirloom—is, as Commander MacAlpine has said, "bound up with the nation's history, and representative of her genius"—it has become *ipso facto* national property—spiritually, that is, of course—no matter who happens for the time being to be the titular owner of its concrete substance. To claim the inalienable right to sell it away from the nation is to assert a little too stringently the doctrine of "what's mine's mine"; nevertheless, the vendor, who may possibly part with the treasure under a very acute sense of bereavement, mourning it with the exceeding bitter cry, "My poverty and not my will consents," should at least have the opportunity of selling or mortgaging it to the nation.

France, as Commander MacAlpine does not fail to note, has passed a law that should certainly check the alienation of works of æsthetic value and importance. By an Act dated August 31, 1920, articles of national interest in history or in art may not be exported without permission obtained from the Ministre de l'Instruction Publique et des Beaux-Arts, provided that such objects are of date anterior to 1830, or are the work of artists who have been dead more than twenty years; and the Act applies also to objects dug up from French soil. Permission to export, however, implied the payment of *ad valorem* export duties ranging from fifteen to twenty-five per cent. For these varying rates, however, an all-round duty of ten per cent. was eventually substituted.

It will be recognized that this matter of the alienation of national art treasures does not simply and solely refer to easel pictures, sculpture, or treasure-trove. It relates very particularly to objects that adorn and dignify buildings—to objects that have an architectural as well as an æsthetic value; and certain happenings, more or less closely relating to buildings, have provoked the stock jest-in-earnest that if we continue to part with our valuables at the present rapid and unchecked rate, Stonehenge may some day be deported to the Yellowstone Park, and St. Paul's taken over to form a central feature of the new capital city of Canberra. It has even been rumoured—possibly without any other warrant than that of plausibility—that our good friends the Americans have offered a heavy price for the ostracized Temple Bar. Nor would it be surprising to hear

that Adam fireplaces and Angelica Kauffmann enrichments had occasionally found their way across the Atlantic.

Apparently the American relic-hunter cares less for the decorative or æsthetic value of the object he covets than for its historic or personal interest. For example, objects in the Bolingbroke rooms which we illustrate this week might not be likely to tempt him by any beauty they may be thought to possess; but he would keenly appreciate their association with the brilliant but bibulous statesman and author who alternately caroused and wrote history there, and with the little crooked poet Pope, who wrote there some of his most pungent verse.

Any protest against the deportation of valuable British works of art is commonly met by a *tu-quoque* reference to the Elgin Marbles. The charge of vandalism in the appropriation by the British Museum at Bloomsbury of sculptures that ought to adorn the Parthenon at Athens has been repeatedly and plausibly, if not convincingly, met; and our concern here is not with the ethics of past gains, but with the prevention of present and future loss. Whenever an Elizabethan, a Jacobean, a Georgian house is about to see dissolution, the enterprising American is pretty sure to outbid us for the treasures of art it contains—for the overmantels, panelling, and other specimens of the national taste and skilled craftsmanship of a bygone day, as well as for the "objects of bigotry and virtue dear to the heart of the Kernoozer," as some genius has expressed it in a consecrated phrase. Nor is the issue altogether a mere matter of sentiment. Were we to cling tenaciously to such "national heirlooms," the artist and the craftsman of the present day would derive encouragement and stimulus from the fact. He would feel it worth while to aim at producing something that might eventually come to be cherished to the extent of keeping it in the country by Act of Parliament.

Long and Honourable Service

Yesterday the President's office was the scene of a very pleasant little function. Not his office of President of the R.I.B.A. (that can have nothing to do with any kind of "scene!"), but the office in Staple Inn Buildings, in which, when the other office permits him, he achieves architecture. In that office, "boy and man," Mr. Robert Ardley has worked for fifty years with exemplary diligence and flawless fidelity. Yesterday this fine record was celebrated quietly but cordially; and there were keepsakes toward. In his time, Mr. Ardley has acted as confidential clerk to two Presidents of the R.I.B.A., and Mr. Michael Theodore Waterhouse, M.C., is of the third generation of the distinguished house Mr. Ardley serves. It is a very notable Jubilee, on which we offer our sincere congratulations to the President and his son, no less than to their "invaluable ally and friend"—for so they are wont to speak of him—Mr. Robert Ardley.

Unification and Registration

A further stage was reached in the chequered history of the Unification movement on Monday in last week, when the committee met for the purpose of approving, or otherwise, the draft statement on Unification and Registration, which is published on another page. The discussion was, as usual, somewhat lively, and it must be a matter for regret that the unconquerable serenity of one or two members of the committee was not extended to their brethren, certain of whom were obviously "asking for trouble." Every one realizes the importance of the issue, every one knows that both sides cannot possibly win, but surely more could be achieved by a determinedly amicable discussion of differences than by the present bitter dissension. Less harm would be done were the battle confined to the four walls of the council chamber, but when the ignoble details are disseminated far and wide by the press, whose columns are filled, moreover, with correspondence of peculiar acrimony, the dignity of the profession is bound to suffer. The public washing of so much dirty linen is, to say the least of it, unfortunate.

Sir Reginald on the Bridge

Sir Reginald Blomfield, in a letter to "The Time comments with his customary terse vigour on some marks made by Sir J. A. F. Aspinall in a lecture on "Po War Problems of Transport." Sir J. A. F. Aspin having suggested that "a double-decked bridge could constructed at Charing Cross, having all the architectu features with which architects desire to ornament creations of the engineer," thinks the prospect of a doub decked bridge is appalling, and adds that "what archite do not want is 'to ornament the creations of the engine It is this fallacy," he goes on, "which has spoilt so mu fine engineering construction. What architects do want to see whether it is not possible to develop great archit tural forms out of the necessities of actual constructi and the only way to arrive at this is for architect a engineer to co-operate from the first, each contributing share of creation to the ultimate form. If the Char Cross scheme is ever realized, it will only be by this intim co-operation that it will be possible to attain someth worthy of the great opportunity." Such co-operat should not be difficult, and it is certainly odd to refl that the experiment of bringing in the architect at very beginning instead of at the end of the building the bridge has yet to be tried.

Architecture for All

Upon the public interest in architecture its succ æsthetically and otherwise largely depends. We h expressed this view so often that we are almost tired reiterating it. Professor C. H. Reilly, of Liverpool Univ sity School of Architecture, however, resumes the the very persuasively in "John o' London's Weekly." holds that "with the loss of a critical public the desig of the buildings we pass each day have no public opin to act as a curb on their exuberance. The appearance a new building in a first-class street meaning so little to inhabitants, architects and their clients have paid, in last fifty years, more consideration to other aspects of problem it represents. The man who can show the grea lettable floor-space has had most of the new buildings erect, regardless of whether he was an artist or not, whether he had even a scholarly knowledge of the fo tradition has given as a language to architecture." A comparing some new with some of the older big buildi in London, insinuating rather cleverly what is and w is not to be admired, the Professor concludes his re instructive article with the reasonable contention tha our schools of architecture and in an educated pu opinion "lie our two best ways of escape from the muc our streets now present." We cannot withhold from fessor Reilly our congratulations on the ability with wh he states the case for the popularization of architect nor from the Editor of "John o' London" for his enligh ment in providing so effective a platform for the preac of this attractive doctrine of architecture for all. Not Professor Reilly can be said "to preach." Rather insinuates; and he does it very adroitly and persuasive

Professional Classes Aid Council

During the war it was very quickly realized that am the professional classes there were many families would suffer severely from financial stress. Accordi the Professional Classes Aid Council was formed, and registered under the War Charities Act, 1916. sufferings did not, of course, cease simultaneously with war; and now the Council are compelled, owing to lac funds, to refuse applications for assistance with the ed tion of children, grants in illness and convalescence, other forms of help. Professional men who do not lik see so useful a movement languish through lack of fu should communicate with the secretary at 251 Brom Road, S.W.3.

Bolingbroke House: The Tragedy of a Great Name

WHEN he is thought of at all, Bolingbroke is generally regarded as a brilliant mistake. Speaking generally, however, one can say that he is not thought of at all. Like several very erent men, he is ignored, firstly because his mercurial, net-like progress appears superficially to have had no uence upon affairs, and secondly because he is sup- ed to have "gone wrong." In this respect he can be pared to Blake, about whom a mystery still clings— ke who, only recently "discovered," is regarded sus- ously by a great many people on account of his inter- rse with spirits. If one consults actual facts, however, discovers that Bolingbroke had an extraordinary uence upon his time, politically and mentally. It was in effect, who brought to an end the age of political ruption which Walpole epitomized. It was he who nulated most of the modern English political ideals. his profound influence, too, upon the minds of the kers of his day—upon such minds as Pope, Voltaire, ft, Burke, and Pitt—he made his amazing personality lized. As regards his literary capacity, he is recognized day as one of the great masters of pure and simple tion. Bolingbroke, in fact, was a great man. Anyone studies his life must come to that conclusion. His ers in particular throw upon his character a light which eals him not as the unsubstantial rhetorician and "windy nomenon," but as a thinker far in advance of his time, ral, sincere, and impatient of the chicanery and glit- ng unreality of the day.

He was born in Bolingbroke House, or, as it was then called, Battersea Manor. Those who see it to-day are hard put to it to realize the appearance of the old Manor of 1678 (the year of his birth), or of the Battersea which lay around. There are old prints, however, which depict the house peeping over a low wall at the river, which flows between fields and clusters of trees; and the Manor itself is described as "surrounded by great gardens and pleasant fields," with avenues of trees on either side of it screening it from public view. Battersea was famous for fruit gardens then, and you passed through hayfields to the ferry which took you across to the village of Chelsea nestling on the flank of its common. The ferry lay on one side of the Manor, and belonged to it, and the church stood on the other side, separated from the house only by a wicket gate. You have to imagine the sunlight from a clear sky lying upon the hayfields and upon the trees, and Swift bathing, as he used to do, in the river near the church. No doubt a yokel of Battersea, rowing by in his fishing boat, would indicate the solitary bather with his finger. "There be t' gloomy Dean. 'E be a reg'lar caution,' e be."

The date of the house is uncertain. The first member of the St. John family to obtain the grant of the Manor was Viscount Grandison, Bolingbroke's great-great-grand-uncle, who died in 1630; so at any rate the house was pretty old when Bolingbroke came into possession of it; and he himself describes it to Lord Marchmont in 1740 as "an old and decayed mansion." All the early part of his life was spent in it, and in the Cedar Room he is supposed to have indulged with his boon companions in drinking-bouts of the wildest description. At the age of twenty-seven he

BOLINGBROKE HOUSE, BATTERSEA, AS IT IS TO-DAY.

was Secretary for War, an office which he discharged with the utmost efficiency, as even his detractors admit. Marlborough, who was then Commander-in-Chief, admired him enormously. At the age of thirty-two he was Secretary of State. Then Anne died, George I was proclaimed king, Bolingbroke and Oxford were impeached for high treason, and Bolingbroke fled to France, where he joined himself to the Stuarts. The middle of his life, therefore, was spent abroad. Later, however, he was allowed to return, and in 1744 we find him writing: "I go into my own country as if I went into a strange country, and shall inhabit my own house as if I lodged in an inn." A year later he repaired some of the house, and improved it, and it is suggested that he designed the ceilings upstairs, one of which is illustrated on page 681—the only one left. But unless he consciously imitated an earlier period, which seems unlikely, the design of his ceiling does not tally with the supposed date.

For the last seven years of his life Bolingbroke lived at Battersea with his second wife, who was a Frenchwoman. He was as devoted to her as she was to him, and they would have been happy enough had illness not attacked them both. He was an old man as men went then, and his excesses had broken him up; but he was still filled with ambitions, and bitter at the failure of his life, and try as he would to devote himself to philosophy and literature, he kept hankering after the old political excitements. He smelt the battle afar off, heard the tumult and the shouting. Politically, however, he was a dead man. His letters show how keenly he felt this, and with what philosophy he resigned himself to an existence of passive activity. Though passive, yet it was far-reaching. His brilliant and indomitable personality drew the most famous in the land to the house at Battersea. The Manor was familiar with them all—Swift, Pope, Arbuthnot, Thomson, Mallet, Lyttelton, Marchmont, Chesterfield, Stair, Pitt.

Pope is said to have written his "Essay on Man" in th Cedar Room, but the dates do not make this possible. H knew it well, however, and it is still called locally "Pope Parlour." It was Bolingbroke's favourite room. Pi visited him here in his illness, and Chesterfield had h last conversation with him in this room just before h death. He died of cancer of the face in 1751, aged seventy three.

In 1777 the greater part of the house was pulled dow The east wing, which alone remains, is little more than fragment—an early Georgian shell restored in moder times, with a late bay window which can be seen in th illustration on page 677, and a fine dignified doorway, a ve y stately and rather uninteresting. By the side of th poor little Georgian wing stands a box-like structure whic has some business with the mill—the mill which towers u dwarfing everything else for miles around, casting a liveris reflection over the muddy water where Swift bathed, ar screaming to heaven with acres of yellow brick. Betwee the mill and the house is a courtyard in which star wagons and traction engines. A monotonous clank machinery falls upon the ear. Inside the house is swe and garnished. You enter a dark, square, empty hall, yo find doors boarded up, scraps of panelling here and ther plain boards for the floors, on the staircase the muc worn wooden treads. The staircase is magnificent, neve theless. It is of a very early type, as the illustratio display, and it has the broad massiveness of that ear period. The hand-rail is remarkably wide, the baluste are as thick as one's wrist. The newels look like the bas of columns. A horse and cart could pass up the stai The rooms on the first floor are now used as offices. one of these the old ceilings are to be found, divided in several sections, but belonging apparently to one lar room.

From the hall you dive into a long, dark, panelled pa sage, to emerge eventually into "Pope's Parlour" itse

BOLINGBROKE HOUSE, BATTERSEA: THE ENTRANCE HALL AND STAIRCASE.

Architectural Details. 24.—Detail of Staircase, Bolingbroke House, Battersea

This view shows a detail of the balustrading and panelling at first-floor level. The staircase is a splendid example of early Renaissance design and craftsmanship. All the mouldings are very bold, and the handrail and twisted balusters are of the customary substantial character.

BOLINGBROKE HOUSE, BATTERSEA: A CEILING ON THE FIRST FLOOR.

py enough, this is filled with typists and typewriters, ıgh whether indulging in the genteel art of versifying ɔheir distinguished forerunner it is not for an inquisitive rıger to inquire. Really, beyond its historical interest ıe-oom has no charm. The panelling is Jacobean and ɛtmely unpleasant, and the red colour of the wood ɛtıcts nothing from its ugliness. It is small and dark, ıcthe modern appurtenances of office life do not fill one it exhilaration. On every hand one is reminded of the passing of time, of change, of death, and of the grave. Its one-time tenants have found a permanent home in the church near by. The last echo of revelry has long since died away down the dark passage. Even the ghosts of the dead have slunk off before the chatter of the invading typewriters. There is not a shred of romance or of sentiment left. The past with its colours and its joys and its English figures has vanished utterly.

THE CEDAR ROOM: DETAIL OF PANELLING.

It is terrible to think that we should so ignore the past that a house with such associations should be shouldered down by factories on every hand without a voice raised in protest. Yet there appears to be no way of saving it. The evil has already gone too far; to-day there is but a fragment left of a magnificent whole. When this goes, however, it is gone for ever, and no efforts of ours or of our children can recall it. Is there nobody who will preserve it for us as it stands? Almost certainly various people will buy bits of it to cart away as curiosities, or to put into museums where they will talk glibly of our "national heritage," and such-like. But these boards, these walls, were once called "home" by living men and women knowing the sorrows and the delights of life as keenly as we. Surely we commit a sacrilege in turning their familiar and well-loved haunts into museum specimens, or, infinitely worse still, in shipping them to other countries to form "curiosities" for the edification of multi-millionaires? Rather than that, we had better chop up our "Pope's Parlours" into fire-wood and turn them to some practical use, as we turn dead bodies to use by burying them in the ground. It is sad enough to discover these poor relics long after the spirits which gave them life have disappeared. It is appalling to see them exhibited as curiosities long after the environment and the atmosphere which made them curiosities has disappeared. The idea which prompts the dealer to ship an "art treasure" across the Atlantic is the idea of making money. Let him make money by all means—we all want to make money—but surely we are not willing that he should make money by selling the skeletons of people we have loved and admired, who belong to us, and to whom we be'ong. H. DE C.

NOTE.—Should you wish to visit Bolingbroke House, the way is easy. Crossing Battersea Bridge from Chelsea, you will find Church Road directly on your right. No. 112, halfway down the street, is the Mill of Mark Mayhew, Ltd., in whose grounds Bolingbroke House stands.

St. Bride's Church, Glasgow

ST. BRIDE'S CHURCH, Glasgow—a church with an extremely interesting and varied history—is being rebuilt from the designs of Mr. H. O. Tarbolton, F.R.I.B.A., architect. The rebuilding was begun in 1913, and the plan reproduced on this page shows, by means of tone and hatching, the parts already completed and those which remain to be carried out.

About thirty years ago the church originated in a little wooden building formerly belonging to the Earl of Home, which was taken down and re-erected on a piece of ground in Kelvinside. In 1899 the whole building, with chancel and vestry, a total weight of forty tons, was wheeled, in an hour, with the aid of three traction engines, to a newly acquired site half a mile away. Eventually the building was placed so that it could form a temporary nave to a permanent chancel. In 1903 the foundation stone of the chancel and one bay of the nave of a permanent stone church was laid, the completed portion being dedicated in the following May. In 1906 the western portion of the nave was begun, including the crypt below the nave with north and south arcading and a portion of the north aisle, and this part of the building was dedicated in 1907. The cost of the site and this section of the church was £13,000.

In 1910 serious defects were discovered in the nave and substructure, and eventually Mr. Tarbolton was asked to report on the fabric, and was appointed architect for the completion of the church. On the advice of Mr. Tarbolton, it was decided to adopt radical measures to secure the stability of the building, and to take down and completely re-build certain portions of the work. At the same time it was decided to take advantage of the reconstruction and to remodel the plan and arrangement of the church.

Sketches and plans were prepared showing the retention of portions of the original building which after reparation work would accord with the new scheme, and estimates were obtained and accepted for the whole of the reparation work and for the following portions of the building : tower, double aisles on the north sacristy, choir vestries and lavat new entrance porch and stair from cl to tower, memorial chapel, organ wood roofs over nave, sanctuary, a and other offices, electric light, he and ventilation, marble floors in tuary and Lady chapel, oak doors fittings, rood beams and figures. of this work has now been complete

The tower is 97 ft. high, and is fin with a square top, with embrasur each side of the parapet. Under parapet is a stone cornice enriched carved blocks illustrating symb subjects. On each face of the towe large, deeply recessed, double l windows, filled in from the springing upwards with geometrical tracery, below that point with perforated A feature of the west front is a niche taining a statue of St. Bridget of Kil The tower also contains a bell, the of Mr. Hugh Reid, who died in 1913

Throughout the interior of the ch the walls are faced with ashlar, an

PLAN OF ST. BRIDE'S CHURCH, GLASGOW, AS REMODELLED.
H. O. TARBOLTON, F.R.I.B.A., ARCHITECT

VIEW LOOKING TOWARDS LADY CHAPEL.

VIEW LOOKING TOWARDS NORTH-WEST CORNER.

ST. BRIDE'S CHURCH, GLASGOW. H. O. TARBOLTON, F.R.I.B.A., ARCHITECT

plastering has been used. The stone arcade dividing the Lady chapel from the intermediate aisle consists of richly moulded shafts and caps and arch mouldings. The east end of the Lady chapel is recessed with a stone arch over, within which a mullioned window permits the sound of the organ to reach the Lady chapel. Carved stone corbels carry the arch mouldings. In the recess at the east end of the chapel stands a marble altar with panels of mosaic work. On the wall to the south of the altar is a stone niche containing a credence table and a figure of the Virgin and Child, and on the north wall of the Lady chapel are two large four-light traceried windows, the easternmost of which is already filled with stained glass.

On the north side of the Lady chapel is a small memorial chapel containing a marble altar at the east end, and a deep recess in the wall for a recumbent figure. Crossing the church at the entrance to the chancel is a carved rood beam, supported by two winged angels carrying carved and painted shields bearing the arms of Glasgow and Galloway. The rood beam carries on a slightly raised base the Cross, with a figure of the Lord and two kneeling attendant figures, and there are three decorated shields at the base. Two outspread hands, symbolizing the act of Divine acceptance, form a feature at the top of the Cross. British oak, slightly darkened, has been used for the doors and fittings, which are artistically carved. The organ console is placed on the north side of the choir stalls. The organ will be placed in the loft immediately behind, over the choir vestry. The corresponding loft in the south aisle will become a minstrel gallery. The chapel has a stone-paved floor, electric light, and is heated by means of radiators.

The window in the Lady chapel was executed by Mr. Karl Parsons (London); the stone carved figure of Our Lady by Mr. Eric Gill (London); and the statue of St. Bridget of Kildare by Messrs. R. Bridgeman and Sons (Lichfield).

The various contractors associated with the work were as follows: Messrs. Limmer Asphalt and Paving Co., Edinburgh (asphalt roofs); Alex. Muir and Son, Glasgow (stone); James Young, sculptor, Glasgow, and William Vickers, Glasg (carved work, stonework); Wm. Li and Sons, Ltd., Edinburgh (steelwo fireproof floors, and partitions); Rob Kidd, Edinburgh (tiles); James Gra joiner, Glasgow (other roofings and wo block flooring); Geo. Wragge, Ltd., M chester (casements and casement fittin Colin Turner (plumbing and sanit work); Hutton Bros., Edinburgh (l down pipes and r.w. heads); Allan Sons, Edinburgh (marble flooring); Unc hill and Ritchie, Glasgow (electric wir and fixtures, ventilating apparatus, lightning conductors); John Wall Glasgow (plasterwork); Scott Morton Co., Edinburgh (special woodwork doors); Chas. Henshaw, Edinbu (bronze work); Joseph Kaye and So Leeds (door furniture and lock Powell and Son, Edinburgh, and Al and Sons, Edinburgh (altars); Mei and Philp, Edinburgh (heating ventilating); Mears and Stainbank, Wh chapel, London (church bells, et Scott Morton & Co., Edinburgh (spe furnishings); McArthur Bros., Edinbu (painting and decorating).

Sound-Proofing Walls and Partitions

ONE of the most important problems encountered by the architect in designing hospitals, public and other buildings, is that of making the rooms as free as possible from all disturbing external noises. There is a great demand for reliable information on effective methods for insulating sound, but up to the present such information has been very incomplete. In Bulletin No. 127 of the Engineering Experiment Station of the University of Illinois, "Sound-Proof Partitions," Mr. F. R. Watson collects and presents the available information in a systematic way, giving the methods and results of various investigations relating to the action of materials on sound, describing practical installations of sound-proofing, and setting forth in accordance with existing knowledge recommendations that may be applied where sound insulation is wanted. The conclusions and recommendations of the bulletin are summarized as follows:—

Sound may be transmitted from one side of a partition to the other in three ways; it may progress through continuous air passages, it may pass as an elastic wave through the solid structure of the partition, or, by setting the partition in vibration, it may originate sound waves on the farther side.

These actions are quite readily understood by remembering that sound consists of a series of compressions and rarefactions that progress rapidly through a medium without interruption unless they meet a new medium with a different elasticity or density. For instance, sound waves in air proceed without hindrance through air passages such as ventilation openings in a partition. If, however, the passages are small in cross-section, as in the case of a porous material, the progress is hindered and a certain amount of absorption of the energy takes place, due to the friction set up between the vibrating air column and the sides of the pores.

When the partition is impervious to air, the direct progress of the waves is interrupted. A thin partition is set in vibration and thus originates new waves on the side opposite the incident sound. For a thicker, more rigid partition, the vibrations are smaller, and a very considerable part of the energy is reflected. The transmission in this case takes place by compressional waves communicated to the solid material of the partition. The amount of energy thus transmitted is usually quite small.

In view of these considerations a sound-proof partition should be as rigid and free from air passages as possible. For effective sound-proofing of a group of rooms, the partitions, floors, and ceilings between adjacent rooms should be made continuous and rigid. Any necessary openings for pipes, ventilators, doors, and windows should be placed in outside or corridor walls where a leakage of sound will be less objectionable.

When the sound is generated in the building structure, as in the vibrations set up by a motor fastened to the floor, the compressional waves proceed through the continuity of solid materials. In order to stop them, it is necessary to make a break in the structure so as to interpose a new medium differing in elasticity and density. For instance, the vibrations of a motor may be minimized by placing a layer of hair-felt, or similar air-filled material, between the supporting base and the floor. Where the machine is quite heavy, footings may be made of alternate layers of asbestos, lead, and leather. Bolting through this material will reduce the insulation, because the vibrations in this case will pass easily through the bolts to the floor. The insulation should thus be left without any bridging over of the discontinuities. Air gaps in masonry will be effective if the air space is not bridged over at any point. A floor floated on sand, sawdust, or hair-felt would approximate this condition. The edges of the floor should be insulated from the walls by felt or similar material.

Especial attention should be paid to ventilation system. All effective sou proof constructions either omit enti a ventilation system or else construct i some special manner to avoid transmis of sound. In some buildings air is s plied and withdrawn from rooms individual pipes that are small in diam and extend without break from the supply chamber to the rooms. results in considerable friction betw the walls of the pipes and the air, wit resultant weakening of the sound wa Without some efficient control of transference of sound through the v tilation system it is a waste of effor construct sound-proof walls, double do and other contrivances for insulatio

When sound-proofing a building details should be considered with res to the likelihood of transmission of so Each room, as far as possible, should made an insulate unit by means of spaces or air-filled materials that sepa it from surrounding walls. Pipes ventilators should be so installed a minimize the chance of transfer of so

The absorption of sound is an esse feature for sound-proofing. Reflec sound and scattering it still leaves it energy. It must be absorbed—tha converted into heat energy by frictio before it is eliminated as sound. means that carpets, furniture, drape etc., should be present, or if gre absorption is desired, hair-felt or sir materials must be installed.

The insulation of sound is a com problem, and a successful solutio obtained only when all the possibi of transfer of sound are anticipated guarded against. While many th may be learned from further experi and much may be gained from addit theory, enough has been discovered to encouragement to the belief that so proofing may be prescribed in the fu with some of the certainty that attends the acoustic design of toriums.

Modern Ecclesiastical Architecture. 16—St. Bride's Church, Glasgow : The Nave, looking towards High Altar

H. O. Tarbolton, F.R.I.B.A., Architect

Some account of the remodelling and enlargement of this very beautiful example of modern Gothic work is given in the article which begins on page 682. Throughout the interior of the church the walls are faced with ashlar, and no plastering has been done.

Modern Ecclesiastical Architecture. 17.—St. Bride's Church, Glasgow: View from Lady Chapel, looking across North Aisle

H. O. Tarbolton, F.R.I.B.A., Architect

The Lady Chapel, on the north side, is divided from the rest of the church by a stone arcade of very graceful proportions. At the east end of the chapel the altar, which is of marble, is contained within an arched recess. At the side is a credence table and a figure of the Virgin and Child.

Construction. 26.—Steelwork of a Modern Commercial Building

IN our issue for February 1 we published plans, perspective view, and other illustrations of Aldwych House, Aldwych, a huge building which is now in course of erection from the designs of Messrs. Gunton and Gunton, F. and A.R.I.B.A. In this issue we give some details of the steel construction, which is of very considerable extent, besides having many points of special interest.

The building has a floor area of 36,000 ft. super, and a frontage to Aldwych of 213 ft. The total height from basement to roof is 110 ft., and the weight of steel employed is approximately 2,000 tons.

The design of the structure is in conformity with the L.C.C. Building Act of 1909, and the steelwork forms a complete frame which carries the whole of the loads from floors, walls, etc. There are in all nine floors; these, as well as the roof, all being constructed on the hollow tile principle with round reinforcing bars bent over the main floor beams, the whole area then being filled in with concrete to the proper thicknesses.

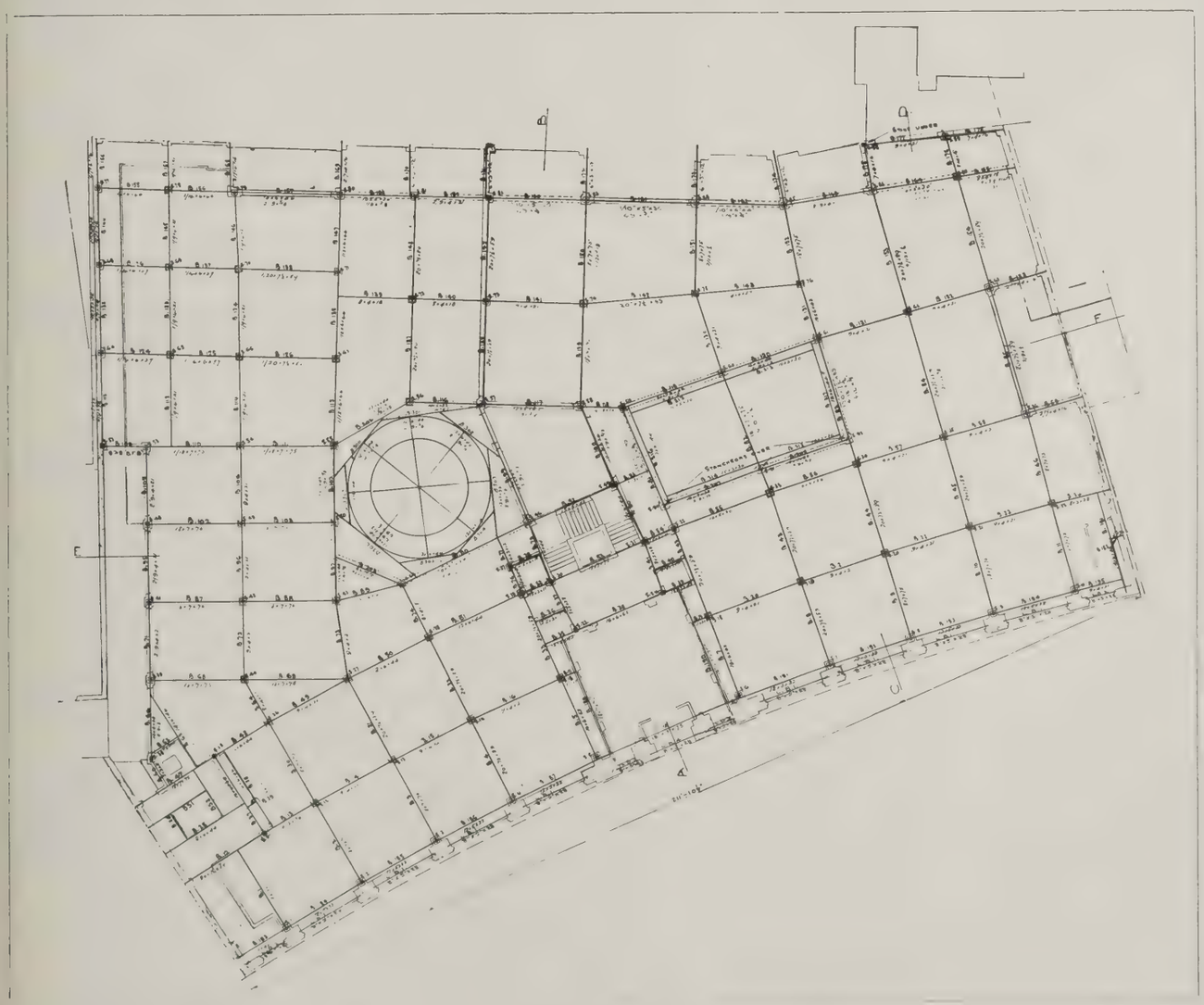
The main floor beams are of rolled steel joist sections, some having flange plates riveted on where necessary to carry the loads. The beams carrying walls are of similar sections to the floor beams, but the majority of them have flange plates, in order to get sufficient width to take the brickwork.

All the above beams are connected to the stancheons with brackets suitably designed for the respective loads, these brackets being riveted to the stancheon shafts.

The stancheons are composed of one or two rolled steel joists sections, with plates riveted on as necessary to carry the loads from the beams. All stancheon joints or splices are riveted, and in order to expedite erection and reduce site riveting to a minimum, the lengths of stancheon shafts were delivered to the site riveted up in two, three, in some cases four floor heights.

Several of the stancheons carry loads amounting to over 400 tons, and these loads are transmitted to the concrete foundations by grillage beams in two tiers—the spread of these being about 10 ft. or 12 ft. square. Owing to the spacing of the stancheons it was found necessary in one or two instances to have one grillage for supporting two separate stancheons, and these grillages were specially designed to meet the particular requirements of the case.

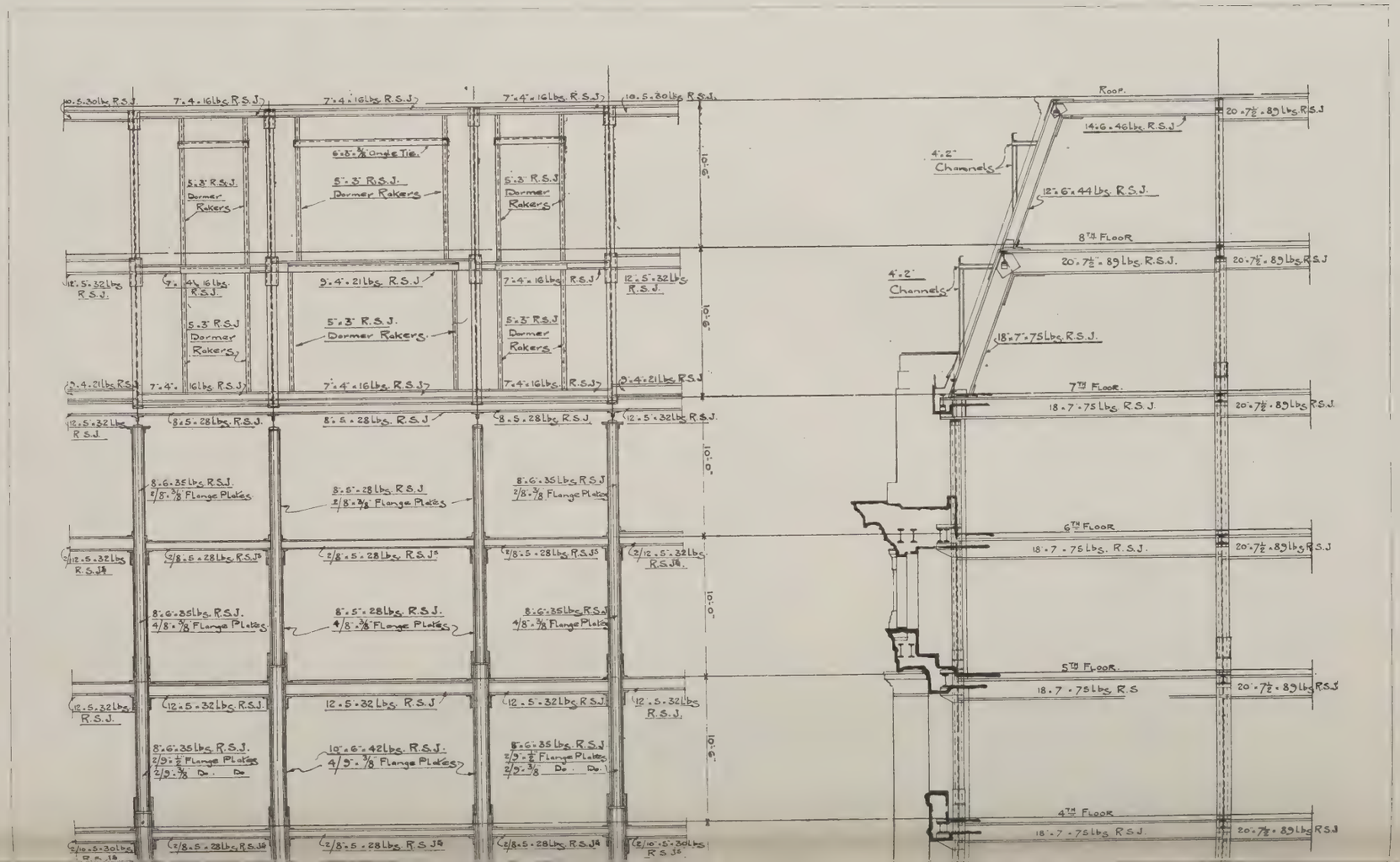
Cleaning brackets are fixed at the tops of all stancheons in back walls and internal areas where there are any windows. These brackets project about 2 ft. from the face of the wall, and are prepared at outer ends for the suspension of cradles for access to windows and

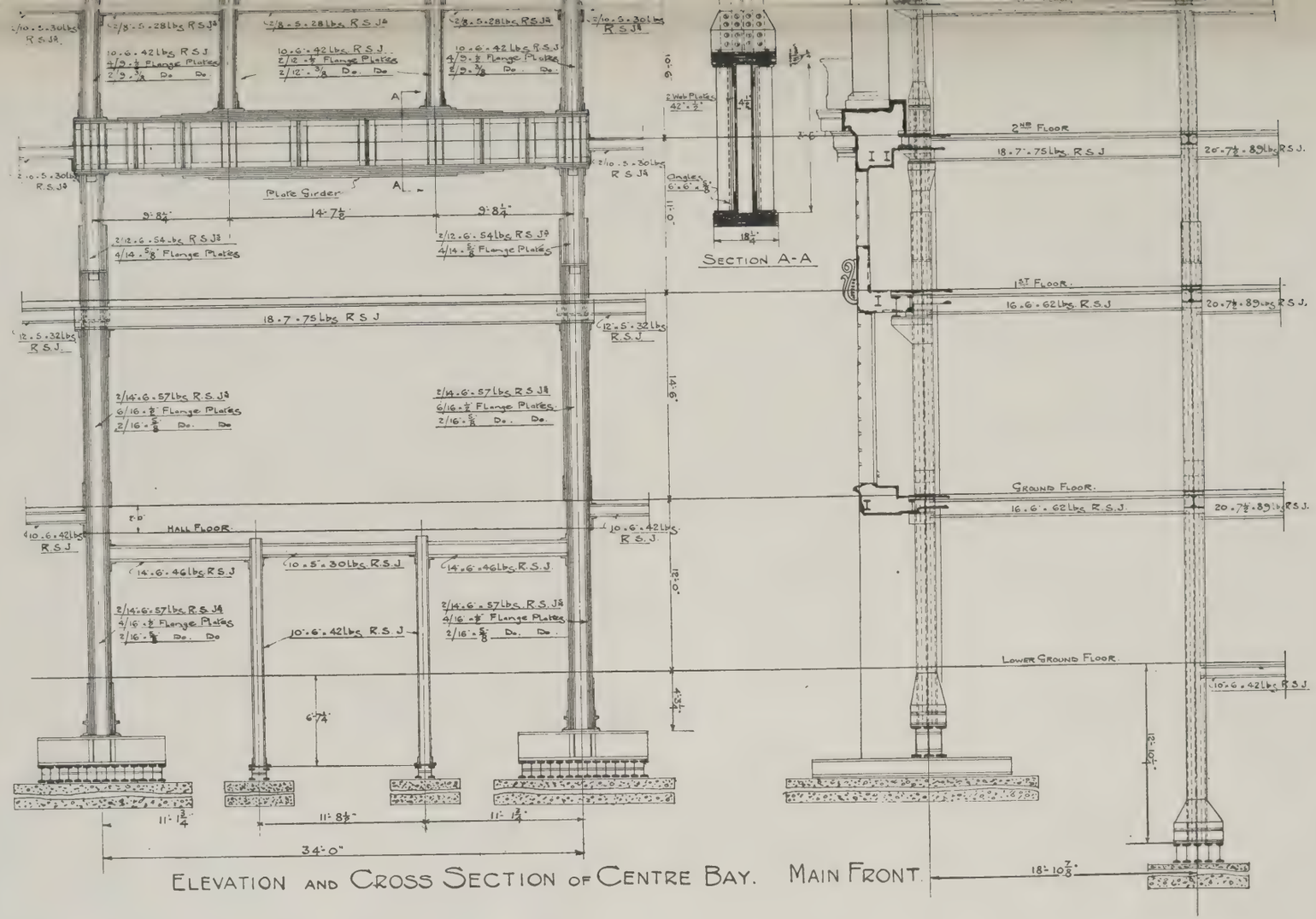


ALDWYCH HOUSE, ALDWYCH, LONDON: PLAN OF STEELWORK.
GUNTON AND GUNTON, F. AND A.R.I.B.A., ARCHITECTS

Aldwych House, Aldwych, London : Elevation and Cross Section of Steelwork, Centre Bay, Main Front

Gunton and Gunton, F. and A.R.I.B.A., Architects





ELEVATION AND CROSS SECTION OF CENTRE BAY. MAIN FRONT.

(See Article beginning on page 689.)

cleaning glass with a minimum of trouble. The stancheons and beams, together with the tie joists between stancheons, comprise the framing and general construction up to the seventh-floor level, at which point the mansard roof commences and continues through two floors to the roof level, at an angle of about 70 deg.

The mansard frames are of particularly heavy construction, and are built up of 18 in. by 7 in. and 20 in. by 7½ in. rolled steel joists, with flange plates also in some instances. These frames are adopted for all external sides of the building, and also for the two interior areas which are shown on plan.

A special feature of the building is the large and lofty entrance hall, which required some special construction in the steel framing, as it was desired to carry the whole central portion of the front, whilst omitting the two central stancheons between ground and second floors. To overcome this a plated box girder, weighing twelve tons, was used to span over the entrance at second-floor level and to support the two intermediate stancheons and the portion of front over. This girder is shown in elevation and section on the detail of the central portion of the front (pp. 690, 691).

In the west interior area there is a circular dome roof, the general construction of which is shown in the drawing on the opposite page. The inside diameter at bottom is 28 ft. 6 in., and at the top 19 ft., with a height of about 6 ft. There are eight curved ribs, each formed of two channels riveted back to back, these being spaced out by circular channel rings at top and bottom, and the whole then filled in with concrete to the outline shown on detail.

The building line at front had to conform to the curve of Aldwych, and this, together with the irregular nature of the site, made the lay-out somewhat difficult, and was the cause of some complicated details, particularly in the mansard roof to internal areas.

The erection of the steel framework was begun less than twelve months ago, and, in spite of delays due to the coal strike of last year, was practically completed last month. It was supplied and erected complete by Messrs. Geo. Sands and Son, Ltd., of Colwick, Nottingham.

Aldwych House, which has an elevation of Portland stone, consists of sub-ground floor, ground, and eight upper floors, having large unobstructed areas capable of division to suit different requirements. The main entrance hall leads to an inner hall and to the wide main staircase, which is of easy gradient. Three fast passenger lifts are being installed to communicate with all floors. Heating will be by low-pressure hot water. Lavatory accommodation, with continuous hot and cold water supply, will be provided on each floor for both sexes of the clerical staffs, together with separate accommodation for principals. Metal casements will be used for all front windows, and double-hung wooden sashes for all back areas.

Parliamentary Notes

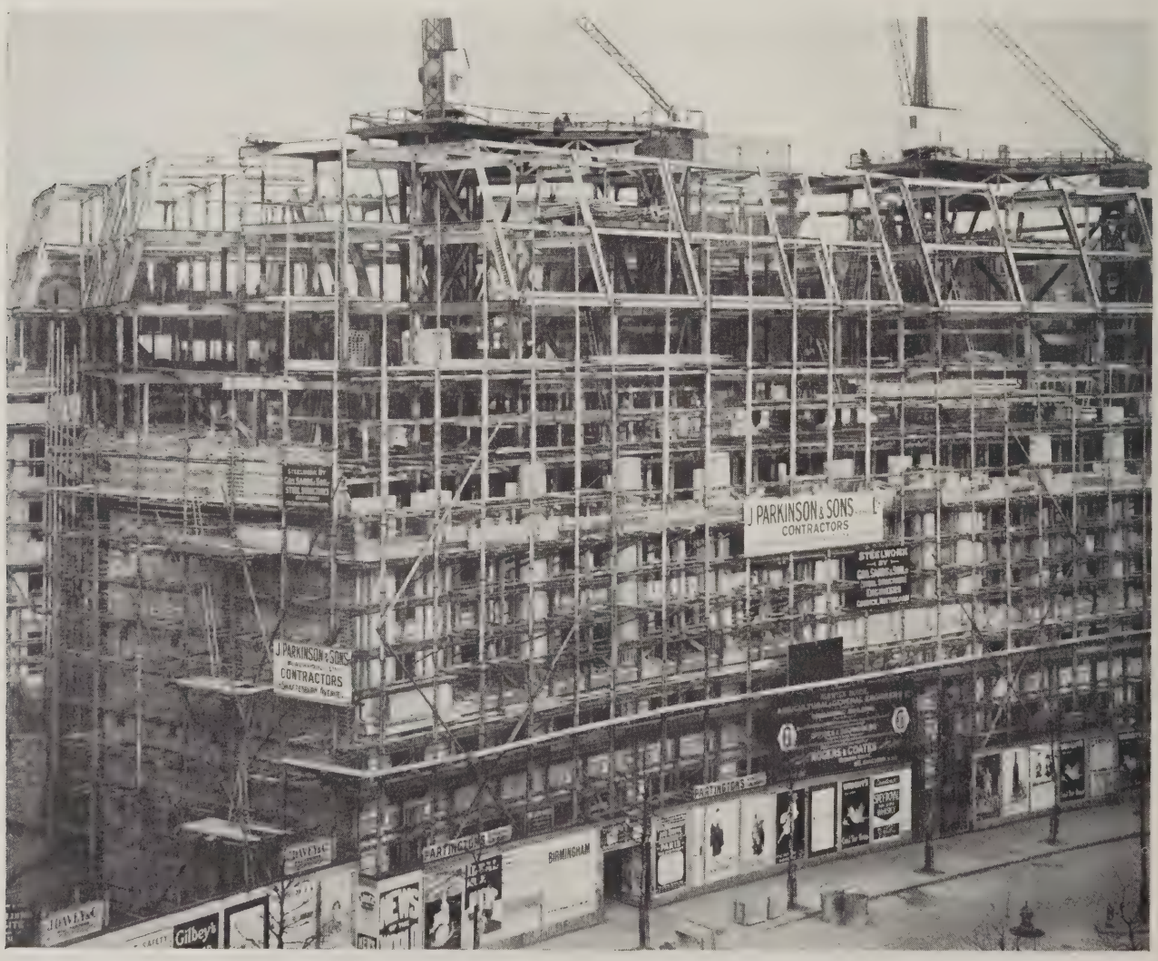
BY OUR SPECIAL REPRESENTATIVE.

Housing Progress.

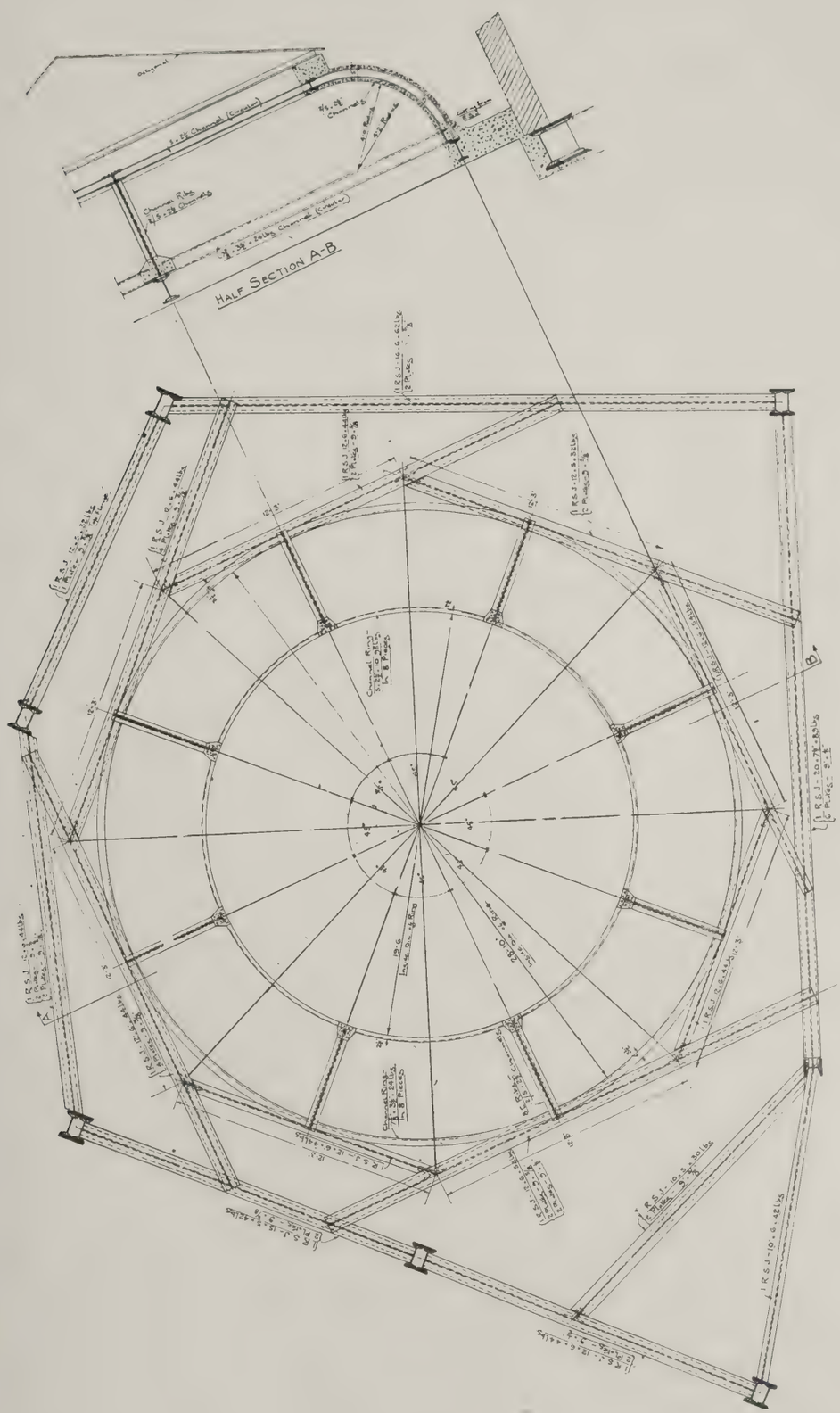
Sir A. Mond, Minister of Health, stated in the House of Commons that the number of houses completed by local authorities, private utility societies, and private builders, under the State-aided scheme, on April 1, was 130,335, the majority of which were, of course, occupied; and, in addition, 2,928 dwellings had been provided by the conversion of huts and hostels; 52,417 houses were in course of construction by local authorities and public utility societies, and 21,151 houses, with which those authorities had been authorized to proceed, had not yet been commenced. In addition, preliminary certificates had been issued for 12,295 houses to be built by private builders. It was not the intention of the Government to proceed with further houses beyond the number he stated on behalf of the Government last summer. Local authorities were at liberty to build houses outside their assisted schemes.

Unemployed Building Trade Operatives.

Dr. Macnamara, Minister of Labour, informed Mr. T. Thomson that on April 10 the number of men in the building trades in Great Britain registered as unemployed was 128,310, of whom 48,988 were craftsmen and 79,322 labourers. The amount paid in benefit, including allowances for wives and children, for the pay week next before April 10, was estimated at £92,000.



VIEW OF ALDWYCH HOUSE IN COURSE OF CONSTRUCTION, WITH STEELWORK OF MANSARD ROOF IN POSITION.



ALDWYCH HOUSE, ALDWYCH: DETAILS OF STEELWORK FOR OCTAGONAL AREA ROOF.

The Stability of Walls.—I

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

SOME very useful knowledge may be easily acquired concerning the stability of walls if the subject is dealt with methodically. It is well known that when the centre of gravity of a body overhangs its base the body must fall, and a wall in the position of Fig. 1 would naturally go down. Walls are, however, built upright, but something may push against them, and the question is then to determine the effects which are produced. First take the case of a simple piece of 9 in. brick walling, 6 ft. high and 4 ft. long, built up on a level surface. What force will be required to push it over? Suppose the brickwork to weigh 120 lb. per cubic foot, then the total weight will be $120 \times 6 \times 4 \times \frac{9}{12} = 2160$ lb. This may be considered to act at the centre of gravity as shown in Fig. 2, with a leverage from the overturning edge of $4\frac{1}{2}$ in. Suppose the overturning force to be applied at the centre of the opposite face, and as the amount is yet unknown we will call it x. Its leverage above the overturning edge will be 36 in. Now the two forces multiplied by their leverages must be equal in amount, therefore $2160 \times 4\frac{1}{2} = x \times 36$, from which a very elementary knowledge of arithmetic will show that $x = \frac{2160 \times 4\frac{1}{2}}{36} = 270$ lb. If we desire to find what wind pressure against the wall this represents we have only to divide 270 by the area of the face of wall $\frac{270}{6 \times 4} = 11\frac{1}{4}$ lb. per sq. ft. This would represent a wind velocity of nearly fifty miles an hour, or a fairly severe gale, but is only about half the pressure that may occur from time to time.

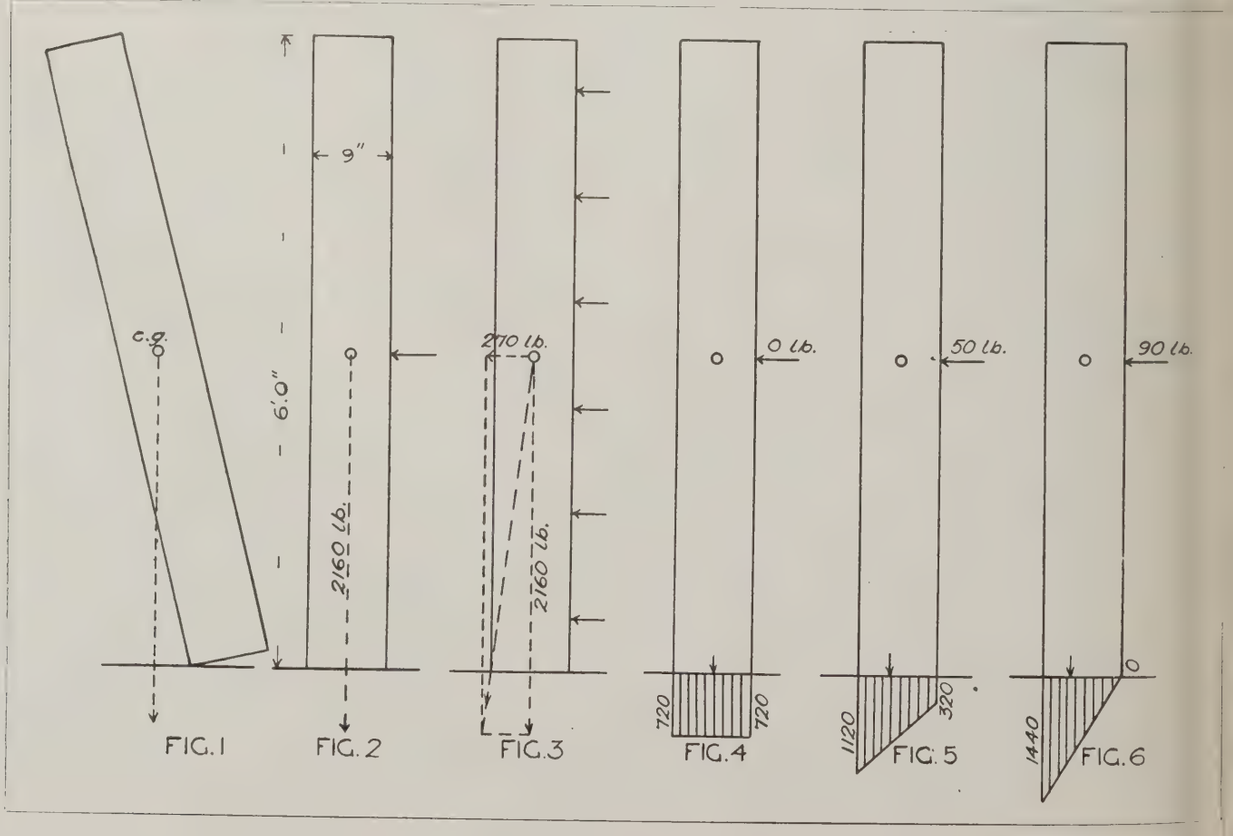
The pressure of the wind varies as the square of its velocity, being $P = \cdot 005\ V^2$, where P = pressure in lb. per sq. ft. against a plane surface perpendicular to its direction, V = velocity of wind in miles per hour. The constant ·005 was fixed by Smeaton, but other authorities give it from ·00254 to ·00585. A velocity of fifty miles per hour would thus give $50 \times 50 \times \cdot 005 = 12\frac{1}{2}$ lb. per sq. ft. A safe height for garden walls and such-like is eight times their thickness, but if the mortar is bad they may be overthrown at any time. The writer once saw a series of 9 in. garden walls, 5 ft. high, thrown down in one night by a northerly gale, due, however, more to the badness of the mortar than the severity of the gale.

The forces acting on the wall we are illustrating can be shown graphically, as in Fig. 3, where the two forces are drawn to scale, acting through the centre of gravity. Upon completion of the parallelogram it will be seen that the resultant passes exactly through the edge of the base of wall, proving that if there is no mortar holding it down the wall is just ready to go over. It is necessary now to consider for a moment this overturning. If the edge upon which it takes place were perfectly sharp the pressure per square foot would be infinite, but no material can withstand infinite pressure. The explanation is that the extreme edge partially crushes so as to have a meas- able width. We can estimate the amo thus. Stock brick crushes with, say, f tons per square foot pressure, = 112000 The wall weighs 2160 lb., spread o 4 ft. run or $\frac{2160}{4} = 540$ lb. per foot r

Then $\frac{540}{112000} = \cdot 00482$ of a foot for wi of edge, or $\cdot 00482 \times 12 = \cdot 05784$ of inch, or rather more than $\frac{1}{20}$ in., wh will be the average width to which edge will crush as the wall overturns.

Now let us go back to the wall ag before the force comes to push it ov Fig. 4 shows it pressing equally over surface at its base, as indicated by equal vertical lines (or ordinates of pr sure) in the small rectangle drawn be it. As the wall weighs 2160 lb., and base is 4 ft. by 9 in., the pressure will $\frac{2160}{4 \times \frac{9}{12}} = 720$ lb. per sq. ft., which is a tr

trifle. Directly, however, any press occurs against the face of the wall produces what is called a bending mome and the effect is to reduce the bott pressure on the side next to the pu and increase it on the other side, as sho in Fig. 5. As the new force is horizon it cannot alter the total amount of vertical forces due to the weight of wall, but it alters their distribution. example, with a force of 50 lb. aga the wall the pressure at base will be 1 lb. per sq. ft. at outer edge, and 320 at inner edge, the average being 720



fore. The way this is calculated is ps a little difficult for beginners, but ould be understood with a slight nation. The formula is $\frac{W}{A} \pm \frac{M}{Z}$, e W = the vertical load in lb., A = rea of base in sq. ft., M = the bend- oment due to the side load, or force verage, Z = the section modulus or ance-value due to the area and of the base = $\frac{1}{6} bd^2$. In this case $\frac{1}{6}$ × breadth of base, 4 ft., × depth of base, $\frac{9}{12}$ ft. squared, so that

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{2160}{4 \times \frac{9}{12}} \pm \frac{50 \times 3 \text{ ft.}}{\frac{1}{6} \times 4 \times \left(\frac{9}{12}\right)^2} = 720 \pm 400,$$

or 720 + 400 = 1120 lb. sq. ft. compression at outer edge and 720 − 400 = 320 lb. sq. ft. compression at inner edge.

It is clear that we can go on pushing the wall until we have reduced the pressure at base to zero at the inner edge, as in Fig. 6. We shall then find that the pressure at the outer edge is doubled. Putting the forces down graphically, as shown, the resultant will cut the base at the edge of the middle third, and opposite the centre of gravity of the triangle. The force applied to the wall to produce this is seen to be 90 lb., because

$$\frac{W}{A} \pm \frac{M}{Z} = 720 \pm \frac{90 \times 3}{\frac{1}{6} \times 4 \times \left(\frac{9}{12}\right)^2} \text{ or } 720 \pm 720$$

= 1440 or 0.

The next instalment will carry the subject on to walls where the resultant of the pressures oversteps the middle third of the base, and will explain the various theories involved.

(To be continued.)

nification & Registration Committee Meeting

A MEETING of the Unification and Registration Committee was held at the R.I.B.A. on May 1 for the pur- of considering a draft statement for pu ication and circulation. Mr. Water- e was in the chair, and Mr. Sadgrove unanimously elected vice-chairman of committee. The chairman, introducing statement, explained that, owing to ncies of time, the drafting had been in the hands of a sub-committee. y had been due to the careful work in ascertaining the views and es of all parties. It was high time the committee gave out a statement me kind, and he hoped that the one re the meeting would be adopted out further delay.

r. Yerbury, on behalf of the Licen- s, said that the suggestions contained eir report had not been embodied, moved that the statement should be red back. Mr. Buckland and Mr. ren deplored the delay, and urged need for an immediate statement, and Sadgrove said that it had been im- ible to quote all views. Their object been to keep the document as short ossible and to say what unification y meant. It contained all that tered for the purpose of obtaining an ion. He endorsed the remarks of a ious speaker with regard to the n done by the acrimonious corre- dence which had appeared in the press.

r. Gammell moved that the committee ld go through the statement page by . He suggested that the Defence ue might come to some agreement the committee by means of a round e conference.

r. Keen pointed out that the state- t was not controversial, but solely for nformation of members. In view of orthcoming elections it was important it should reach them as early as ible.

ajor Corlette and Mr. Cubitt raised uestion of admittance to the R.I.B.A. out examination, but the President ted out that the statement was an ession of principles and did not deal details.

fter further discussion Mr. Yerbury's ion, seconded by Mr. Perks, that the rt should be referred back to the committee was lost by 24 to 7.

r. Cubitt proposed and Mr. Gammell nded that the statement should be through in detail, and this was ied by 18 to 11.

his was accordingly done, and after w minor alterations had been made the statement which follows was approved for publication.

The Statement

Unification means a grouping into an organic whole within the R.I.B.A. of (*a*) the entire (professional) member-roll of the Society of Architects, which will cease to exist as a separate body; (*b*) the entire (professional) member-roll of the Architectural Association and of the Allied Societies of the Royal Institute (each Society maintaining its name and entity); (*c*) architects, properly so called, under proper conditions of qualification, who are at present unattached to professional societies.

(N.B.—Until Unification has statutory force, in the form of Registration, the inclusion of these unattached architects will necessarily be dependent on the option of these architects themselves, who it may be premised will not decline the advantages which inclusion will obviously offer.)

Details of the status in the R.I.B.A. to which the present grades of membership in the Society of Architects would be admitted, though not yet precisely defined, are already provisionally outlined to the satisfaction of representatives of the Councils of both bodies. The admission of unattached architects, while conferring on them such a status as will offer them most valuable advantages, will not derogate from the prestige and interest of those existing members whose membership of the R.I.B.A. is based on qualification by examination or other tests.

The advocates of constructive Unification never lose sight for a moment of the relation of this movement to Registration. They regard Unification as a preliminary step without which Registration is a mere vision, and as a stage in the evolution of Registration which will add incalculable value and force to Registration when finally the latter is obtained. In other words, Unification has a double value. It is an end in itself—actually within grasp and well worth attainment even if Registration be remote.

And, besides this, it is a means, and an essential means, to Registration.

Unification may reasonably be looked on as the method whereby every worthy and bona-fide architect in the United Kingdom—

1. Can actually and actively co-operate with his professional *confrerès* in the advancement of Architecture by a direct interest in the R.I.B.A., and thereby assist the laudable objects for which the R.I.B.A. was founded.

2. Can have a direct voice and share in the education, management, and control of the Profession.

3. Can contribute and share in the advantages to be gained from a profession united in, represented, and led by a single body of properly constituted authority and unquestionable pre-eminence, such advantages including, *inter alia*, improved prospects of obtaining Statutory Registration.

Unification does not Involve :

The inclusion within the ranks of the R.I.B.A. of any person engaged in any other vocation than that of an architect or architect and surveyor.

Unification is Desirable :

1. Because the Institute so constituted would become numerically larger than any existing bodies, and thereby proportionately more influential, thus enabling the practical removal of many of the now prevalent abuses and anomalies of practice, by the more extended application of the charter, bye-laws, regulations, and edicts of the R.I.B.A., and in particular of its Code of Professional Practice and of its Scale of Professional Charges.

2. Because the R.I.B.A. would be strengthened by the direct interests and opinions of those trained outside, with whom it is at present only remotely in touch.

3. Because it will put the reformed R.I.B.A. in a position to speak indisputably and conclusively for the profession as *a whole*, which legal advice has indicated as an essential position to secure the concurrence of Parliament to the terms of any Registration Bill promoted by the R.I.B.A.

4. Because it will enable the R.I.B.A. the better to carry out the objects for which it was founded; and the work which it has initiated and is fostering for the improved professional position of architects by the wider field wherein its activities can be employed, and will thus materially strengthen the power of the R.I.B.A., enhance the value of its work, and raise its prestige.

5. Because it will provide facilities for—
   - (*a*) The provision of an organization whereby speedy and effective action can be taken on all matters of professional interest and importance.
   - (*b*) The expression of the decision and opinion of the whole profession in agreement or difference with the Government and its

Departments, County Councils, and all other public authorities, companies, and bodies.

(*c*) The support, protection, and defence of the professional interests of architects and the establishment and maintenance of proper etiquette within the profession.

(*d*) The promotion of systematic architectural education and the statutory registration of architects.

(*e*) The maintenance of proper relations with other organizations in all matters relating to building.

(*f*) The education of the public to an appreciation of architecture by press publicity and other means.

(*g*) The undertaking of all other lawful acts required to carry out the foregoing objects.

By rejection of Unification, architects would be reconciling themselves to an indefinite continuance of the present-day conditions and fratricidal polemics of the last generation, by which opportunities for improving the architect's lot have had to be ignored or have been lost, and the cause of architecture has suffered accordingly.

It is obviously of vast importance to the entire Profession that when Registration is at last achieved, it shall find the Architectural Profession in a state of organized unity.

Any policy advocating Registration without prior Unification :

1. Might deprive the profession of the advantages to be gained by Unification.

2. Does not assure that the R.I.B.A. will remain the authority controlling the profession.

3. Makes it certain that the R.I.B.A. will either be—

(*a*) Relegated to an inferior and su ordinate position, or,

(*b*) Subjected by Parliament to overhaul of its constitution a Charter rights, when it v have necessarily but little s as to the manner in which o side architects are to be a mitted to it.

PAUL WATERHOUSE,
President of the Royal Institute of Brit Architects.
Chairman

EDWIN J. SADGROVE,
President of the Society of Architec Vice-Chairman

ARTHUR KEEN,
Hon. Secretary, R.I.B.A.,
Hon. Secretary

[N.B.—A minority statement signed certain members of the Committee v be issued as soon as possible.]

Art Exhibitions

Paintings and Drawings by B. Adeney and Keith Baynes

THERE is apparently nothing that an artist cannot vivify. He can create a work of art out of some riddle in engineering or harmonics, out of an anecdote (do you remember the retrospective exhibition of dead-as-Queen-Anne R.A.'s two months ago?), or the frank representation of a natural object. Only, to be satisfactory, the problem must be for him who employs it a goad and a limitation. A goad that calls forth all his energies; a limitation that focuses them on some object far more precise and comprehensible than the expression of a vague sensibility or, to say the same thing in another way, the creation of indefinite beauty. However much an artist may have felt, he cannot just sit down and express it; he cannot create form in the vague. He must sit down to write a play, to paint a portrait or a still-life. He must work out in earnest what he conceived in the gladness of his heart and of his sensuous emotions.

And, on a whole, English artists do this work uncommonly well, for honesty is theirs as well as skill, and it is evident at this show of Bernard Adeney and Keith Baynes held at the Independent Gallery, 7a Grafton Street. Both are essentially landscape artists, and both labour well to express their very sumptuous and free visions. Of the two, Mr. Adeney is the more spontaneous; there is yet in the younger man a certain hesitancy and heaviness from which Mr. Adeney has at last escaped; but he seems to make it up with his drawings, which show much vitality and directness. Both are modern in their outlook and modern in their technique, and both seem to dispatch their work with much relish.

It is no disparagement to Mr. Keith Baynes to say that he can learn more from Mr. Adeney than vice versa. With the latter one feels that the ideal problem will be the one that raises his power most while limiting his fancy least, a pretty severe standard to go by. Maybe a large painting would not suit him quite as well as the younger man, but going by the excellence of his small oils, there is hardly any need for him to display his talent on ambitious canvases. His large "Farm House" (38) does not appeal so much as his small and delightful annotations; "Frensham Pond" (24) or "Golden Cap" (27) being especially fresh and spirited. It is possibly in the "Well" (46) and "Entrance to the Wood" (57) that Mr. Adeney shows to greatest advantage. The former is distinguished by an incessant elimination of irrelevant details; the latter by a strong sense of composition and of colour. It is as good as a good Vlaminck, no little achievement. In his drawings we observe the same simplicity and "obviousness." What could be simpler and nicer than his drawing "N.G." (49), the head and arm of a sleeping woman, or more natural and honest than his brown crayon study "The May Tree" (67)? One should see these, and so learn from them that fine effects are often obtained not by tormenting the brain, but by letting the hand go as spontaneously as it will.

Mr. Keith Baynes, let it be observed, has very fine oils to his name. "The Pool" (7) and "In the Studio" (14) will prove that. Moreover, his wash drawings are excellent. Rather reminiscent of the rapid and straight methods of Rembrandt, they are forcible, nervously done, and they build themselves well, and each speaks a simple message feelingly. After all, is it not a mere symbolist who uses a notation not to express what he feels, but to convey information, and no more?

Paintings by Charles Ginner

It is very instructive to go from the Independent Gallery straight to the Goupil Gallery in Regent Street, and see another series of landscapes by another excellent English artist, Mr. Charles Ginner. Many readers have doubtless seen his works, for he frequently exhibits in London. A comparison here is instructive, because of the peculiar method adopted by Mr. Ginner. He is a realist "à outrance," one who likes to be driven into that world of minute differences and subtle reactions which—to him—is the world of art.

Therefore, as between his conceptions and theirs lies not so much a chasm as a valley, which indeed can be bridged by a sympathetic understanding of th nature. Yet, let us remember that it w ever so: the best painters, who are alike in some ways, in others are, from t first, the most sharply differentiated si ply because they are the most personal

Thus with Mr. Ginner. Far from t passionate looseness of Mr. Adene art, his is made of meticulous care. leaves nothing to chance; all is planne and planned not in haste and agitatic fingers itching to be at it, but with t deliberation, the critical thoroughn of an architect. There is so much the painstaking craftsman in his meth that for a moment you may overlook t sensitive artist who conceives and execut But, in fact, the effective alliance practical intelligence with fine sensibili is the secret of his strength. Almo every one of his thirty oils bears testimo to this. Look at the agglutination roofs called "A Corner of Leeds" (4) "Factory" (6). The studied logic of t composition may for a time absorb t spectator's attention and blind him more endearing qualities; but, sooner later, he will begin to perceive not or that a scrupulously honest vision h been converted into a well-knit desi but that the stitches are lovely. every part he will be discovering sub and seductive harmonies and balances which the delicacy dawns on him as gazes. The more he looks, the more w he get of that curiously gratifying thi which comes of the recognition of t ostentatious rightness. "Penally C tage, Boscastle" (20) and "Penally Rid Boscastle" (21) are trite, triste, a weary bits of landscapes, but they a bits seen by a discerning eye, and loved and caught—by the sympathetic sen tiveness of a true artist. Mayhap is all distinctly objective art, but sincerity cannot be challenged, nor certain loveliness denied. And that can, at times, abandon himself to almo luscious emotions is shown in his trea ment of "Collin Glen, Belfast" (1), whe a perfect riot of green glades and gre underwoods is so nicely handled that o wishes Mr. Ginner would unbend a lit from the no doubt superb formality whi characterizes so many of his able a clean-cut landscapes.

G. HOLT.

25.—Portion of a Chimneypiece from a House in Great St. Helen's, London

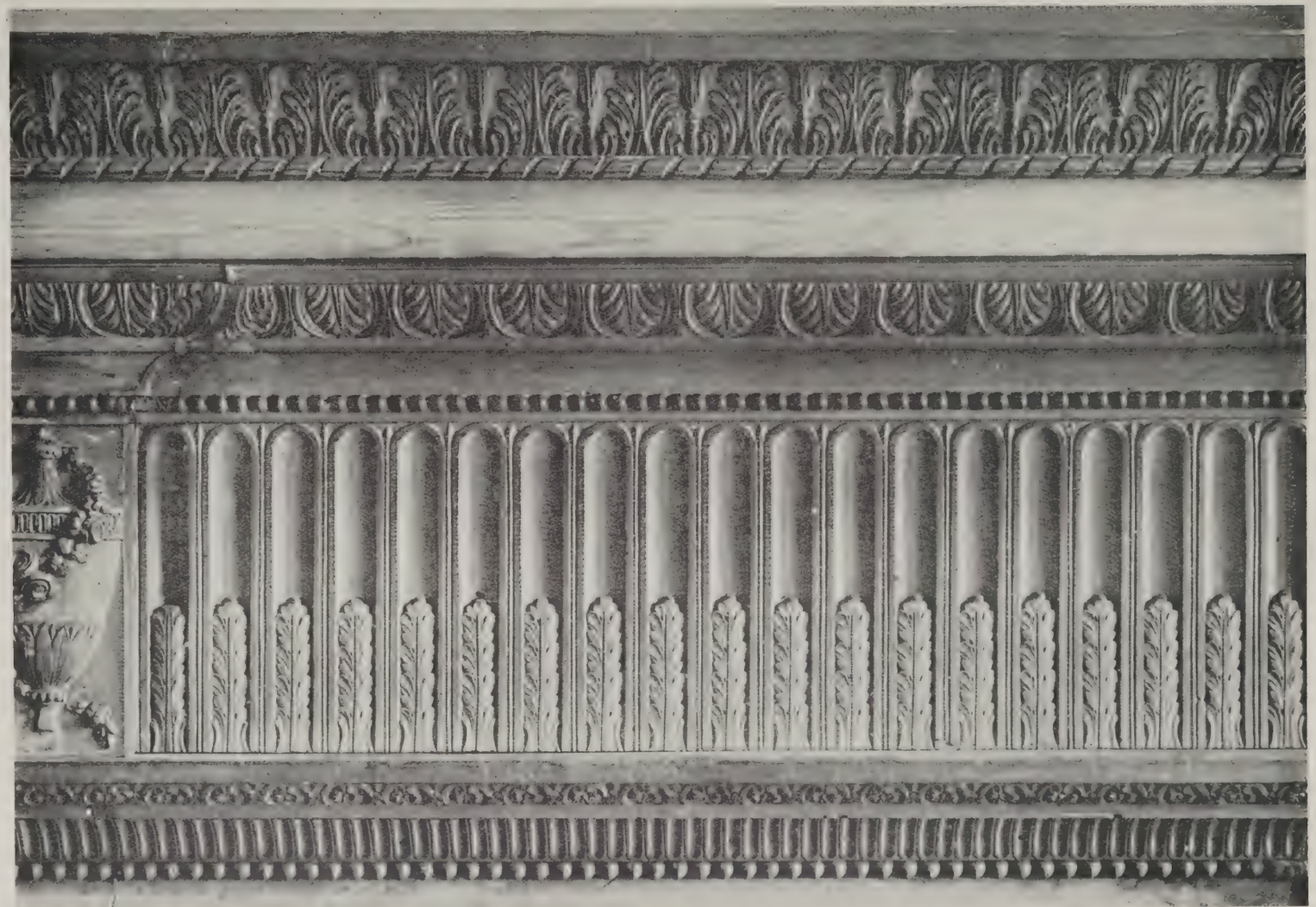


Photo: V. and A. Museum.

This chimneypiece was executed in carved pine, and originally belonged to an old house which stood in Great St. Helen's, E.C. It is 5 ft. 5¼ in. in height, and 6 ft. 2 in. wide. The detail is perfect late eighteenth-century work.

R.I.B.A.

Annual General Meeting.

The annual general meeting of the I.B.A. was held on May 1, with Mr. arles-Wood in the chair.

The hon. secretary announced the ath of Professor Fulton, F.R.I.B.A., . Millar, F.R.I.B.A., Mr. Halliday, R.I.B.A., Mr. French, A.R.I.B.A., and r. Edgar Stones, Lic. R.I.B.A.

Several new members were then formally mitted by the chairman, who subse- ently moved the adoption of the report the Council for 1921–22.

This was introduced by Mr. William oodward, who remarked that he was ing so for the twenty-seventh year in ccession. Referring to the increased mber of Associates, Mr. Woodward said at this was due to elevations from the centiate class. He was much puzzled r the introduction of two new classes, .C.M. and Ret.F.S.

With regard to the negotiations now ing on with the Ministry of Health he ped that architects were being paid omething on account" for their housing ork.

Referring to the report of the Board of rchitectural Education, Mr. Woodward ought that unsuccessful competitors ould be given an explanation of the jection of their drawings. It was dis- artening when they were not told the asons for their failure.

The number of attendances made by e members of various committees should thought, in all cases, be stated; and eaking of the Science Standing Com- ittee, he thought that practical work ould be more valuable. There were, in ct, altogether too many committees, id the example of Whitehall was infect- g the R.I.B.A

The cost of the "Journal" might well, e thought, be diminished. It might be ossible to register it as a newspaper, and ss space could be given to reports.

Mr. Percival Fraser then made one or vo criticisms, especially with regard to e special general meeting of February 7, which he considered the by-law requir- g a two-thirds majority did not apply.

Mr. McAllister explained, however, that e chairman's ruling had decided the natter.

Mr. Fraser wanted more particulars f the proposed new National Building ode, and questioned the expendi- re on Mr. Cope Cornford's book. le complained of the apathy of the ommittee on the subject of library ccommodation, and thought the fire surance unduly small. A complete st of attendances ought to be given, and he work of the Science Committee ncreased.

Mr. Hooper said that bottom had been eached in the public indifference to uilding, and pointed out that there was o control of speculative building.

Mr. Millburn said that the Journal was f great assistance to provincial members.

Mr. Hiorns emphasized the need for reater library accommodation, and said hat the public lectures were a matter of ongratulation.

Mr. Cave, speaking for the Board of rchitectural Education, said that criti- isms of rejected designs were now given hen desired, and a new and more careful ystem was in operation.

Mr. Slater, Chairman of the Practice Standing Committee, referred to the multiplicity of matters dealt with, and pointed out that they were not solicitors and could not give legal advice. Their work was to do good by stealth. He recorded his appreciation of the work of his colleagues.

Mr. Adshead said that housing had hitherto been left to the speculative builder, and now was the time when they should make an effort to capture some housing work.

Mr. Burrows, Chairman of the Science Committee, said that the scientific method was the only one of learning about many of the new building materials, which were jealously guarded trade secrets.

Mr. Perks explained the financial position, and expressed his opinion that subscribers should be the first to benefit by any expenditure. It was a mistake to make grants of money which was badly wanted for the Institute's own purposes.

Mr. Davidge reminded the meeting that on and after January 1 town-planning would become compulsory, and he hoped that members of the R.I.B.A. would capture some of the work.

Intermediate Examination.

The centres for the R.I.B.A. Intermediate Examination, which will be held from June 9–15, will be London and Birmingham.

Prizes and Studentships Pamphlet.

The Prizes and Studentships Pamphlet of the R.I.B.A. has just been published, and is on sale at the Royal Institute, 9 Conduit Street, W.1, price sixpence, exclusive of postage. The conditions of the prizes have been largely remodelled, and the system now in use is based upon suggestions received from teachers and students. For the current year prizes totalling in value over £2,000 are offered. It is expected that there will be keen competition this year for the most coveted awards in the architectural profession.

Conference in Cardiff.

With a view to awakening public interest in South Wales in architecture, and particularly in the R.I.B.A., which is holding its annual conference in Cardiff on June 8 to 10, Mr. W. S. Purchon, M.A., A.R.I.B.A., Head of the Department of Architecture and Civic Design in the Technical College, delivered a lecture on "Architecture and the Citizen" in the Assembly Room of the Technical College, Cardiff, on March 31. This lecture was so highly appreciated that it was decided to repeat it on April 28.

The lecture was held under the auspices of the South Wales Institute of Architects, whose president, Mr. Percy Thomas, O.B.E., F.R.I.B.A., was in the chair. It was copiously illustrated with lantern views.

Opening with a brief survey of the world's famous buildings, Mr. Purchon indicated the great traditions of the art of architecture, its higher significance, and its relationship to the people at various times. After defining Greek and Gothic revivals, the lecturer explained the movement initiated by George Dovey, Norman Shaw, and others, in the new art movement, and the introduction of Néo-Grec. From this the lecturer proceeded to indicate the useful work done by architects in improving the conditions in factories. He then cleared up some of the misunderstandings as to the part played by architects in housing work, showing how English architects by working from the fine national traditional types had established a supremacy in this particular sphere of architecture.

Discussing town-planning, Mr. Purchon touched on the haphazard method that had characterized much civic planning during the last century. He emphasized the need for the regional survey as a preliminary to the preparation of generous town-planning schemes. The main point about town-planning was, said Mr. Purchon, the prevention of future mistakes by the use of forethought. Town-planning was not extravagance, but true economy.

Public Lectures on Architecture.

The R.I.B.A. Literature Committee have again this year arranged a series of public lectures on architecture, on the same lines as those which were given so successfully last year. Arrangements have been made for the following lectures :—

May 18.—"The Value of Public Opinion." By Halsey Ricardo, F.R.I.B.A.

May 25.—"What is Architectural Design ?" By D. S. MacColl, M.A., LL.D., Keeper of the Wallace Collection.

June 8.—"Greek Public Buildings." By Professor Ernest A. Gardner, Yates Professor of Archæology, University College, London.

June 15.—"Some London Streets and their Recent Buildings." By Professor C. H. Reilly, M.A., Roscoe Professor of Architecture, University of Liverpool.

June 22.—(Title later.) By W. H. Bidlake, M.A. Cantab.

The lectures will begin at 5 p.m. Admission free.

The Fetvadjian Exhibition.

The President of the R.I.B.A. has received the following communication from Major-General J. Bagratouni, representative in London of the Republic of Armenia :—"Permit me to express on behalf of my compatriots our deepest gratitude for your benevolent attention and the arrangements which were so kindly made for the exhibition of the drawings of Mr. A. Fetvadjian at the R.I.B.A. As Armenians we are very proud, and it is a great honour for us that the works of our prominent painter should have been exhibited in such a distinguished Institution and appreciated by its President and the Council."

Exhibition of Seventeenth Century Architectural Drawings.

An exhibition of the Coke Collection of Smithson Drawings (by the kind permission of Mrs. S. Coke) and of some newly found drawings of John Webb (by the kind permission of Sir Vere Isham, Bart.) is now being held in the Institute Galleries. The exhibition closes on May 17.

The First Half-Century of the R.I.B.A.

On Monday next at 8 p.m. Mr. J. Alfred Gotch, F.R.I.B.A., will deliver a lecture on "The First Half-Century of the R.I.B.A."

Presentation to Mr. Sadgrove

Past and present members of the Council of the Society of Architects recently entertained the President, Mr. E. J. Sadgrove, to dinner at the Café Royal. The chair was occupied by Major E. C. P. Monson, Past President, who was supported by the four Vice-Presidents, Messrs. Geo. H. Paine, Major C. F. Skipper, Thos. Wallis, and A. J. Taylor; the Honorary Secretary, Mr. L. Sylvester Sullivan, Past V.-P.; the Honorary Treasurer, Mr. E. J. Partridge, Past V.-P.; the Honorary Librarian, Mr. Noel D. Sheffield, Past V.-P.; Mr. Percy B. Tubbs, Past President, and Messrs. Major Harry Barnes, M.P., Ellis Marsland, H. M. Robertson, G. C. Vernon-Inkpen (Portsmouth), A. Burnett Brown, Past V.-P., H. A. Cooper (Kettering), George Baines, Past V.-P., P. B. Houfton (Chesterfield), G. Blair Imrie, W. G. Ingram, Grahame B. Tubbs, J. A. Bowden, W. J. Martin, and C. F. Norman. During the evening the Chairman, on behalf of the subscribers, asked Mr. Sadgrove's acceptance of a silver tea and coffee set and a gold cigarette case, suitably inscribed, as a memento of his four consecutive years of office as President.

A number of other members joined in personally associating themselves with the observations of the Chairman in his allusions to the valuable services rendered to the Society by Mr. Sadgrove, and those who had been prevented by sickness or pressing emergencies from attending wrote conveying their good wishes. A very pleasant evening was brought to a close by the President's reply, in which he succeeded in conveying to his colleagues his appreciation of their personal kindness and his indebtedness to them for their consistent support.

Nottingham and Derby Architectural Society

At the fifty-ninth annual meeting of the Nottingham and Derby Architectural Society, held under the chairmanship of Mr. A. Eaton, M.S.A. (Derby), the Council reported a membership of 119. Three new members were elected at the meeting. The Royal Institute had invited their co-operation in the reparation of ancient buildings and other matters, particularly professional registration and unification. In conjunction with other local artistic societies, the Council had formed a provisional committee to inaugurate a Civic Society for Nottingham.

The Council had been in constant communication with the master builders and building trades operatives, and were pleased to record that the heavy costs of building were gradually but surely coming down, due largely, in their opinion, to the release of Government control restrictions. The financial position was excellent, showing an increased balance of over £55 on the year's working. The reserve fund had also been augmented.

The following officers were elected: President, Mr. A. Eaton; vice-president, Mr. E. H. Heazell; council, Messrs. H. G. Watkin, E. R. Sutton, R. Evans, P. H. Currey, W. B. Savidge, H. H. Goodall, G. M. Eaton, C. H. Calvert, and H. P. Gill; hon. secretary and treasurer, Mr. F. M. Royle.

The president distributed the students' prizes as follows: Competition designs: 1, Mr. Rosher; 2, Mr. King; 3, divided between Messrs. Cowlishaw and Baldry. Measured drawings: 1, Mr. Hasledine; 2, Mr. Baldry; 3, Mr. Tuxford.

The Late Mr. J. B. Fulton

It will be with real sorrow that the many friends of James Black Fulton, F.R.I.B.A., will learn of his death at an early age. His name and talent were doubtless more familiar to the generation of students who preceded the war than to those of the present day.

It is rarely that an architectural career gives such brilliant promise. Mr. Fulton won the Tite Prize in 1899, the Measured Drawing Prize in 1900, the Soane Medallion in 1902, and the Grissell in 1903.

Starting without any exceptional opportunity of training or connection, he won his great reputation as draughtsman and designer by his own natural gift and his amazing capacity for hard work.

It is to be feared that he overestimated his physical strength, and his breakdown was the result of drawing too freely on its reserves. Often the writer saw him after a hard day's work and an evening devoted to architectural teaching, taking home drawings intending to spend a large part of the night on competition work.

Essentially modest and reticent, he could not be persuaded to take a commission during the war, and his breakdown was the immediate result of overstrain and exposure in the ranks.

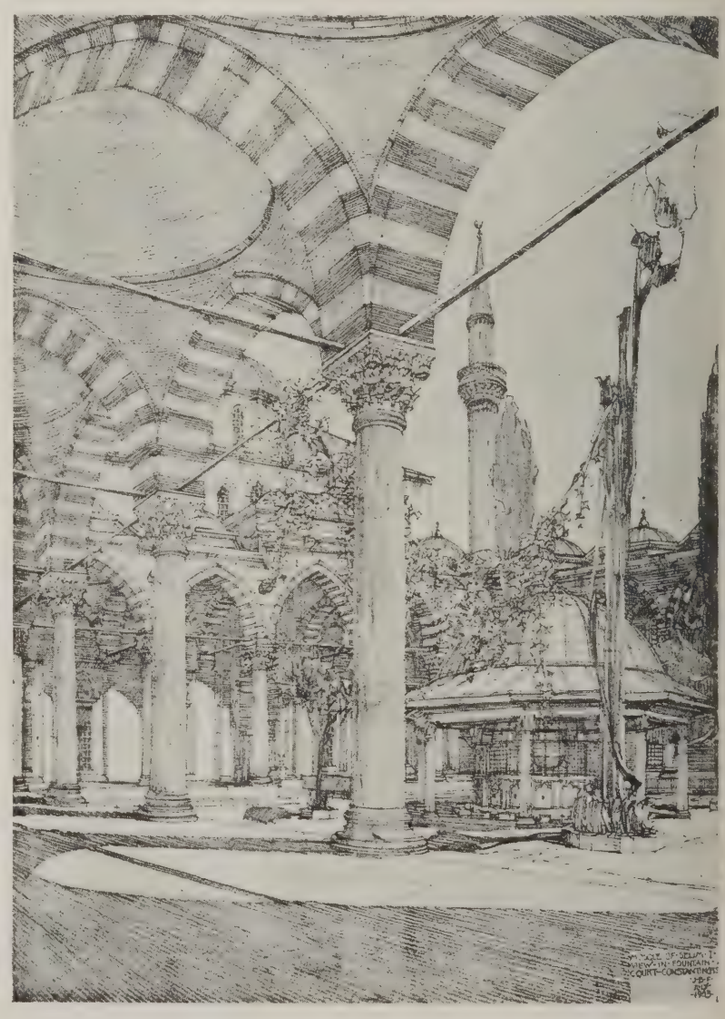
It was hoped that on his appointment as professor at Glasgow School of Architecture his health might return, but doubtless he never fully recovered from his previous breakdown.

Though not gifted as a lecturer, by his great knowledge and rare sympathy he achieved much as a teacher of architecture; no trouble was too great if he might help a student.

Mr. Fulton had all the great qualities of the Lowland Scot—unassuming, but confident in himself and his work, a rare worker, a loyal friend. Our regret must be that by his early death the opportunity for carrying out large work was denied him.

The deep sympathy of all his friends will be with his widow and son.

H. F. MURRELL.



MOSQUE OF SELIM I, CONSTANTINOPLE,
FROM A DRAWING BY THE LATE J. B. FULTON, F.R.I.B.A.

A CHARACTERISTIC DRAWING BY THE LATE J. B. FULTON, F.R.I.B.A.: NORTH-EAST SEMICIRCULAR RECESS OF SANTA SOPHIA, CONSTANTINOPLE

Law Reports

Manchester Surveyor's Bankruptcy

Manchester County Court.
May 4. Before Judge Mellor.

In this case Mr. Thomas Sumner Smith, of 25 Cross Street, Manchester, quantity surveyor, applied for his discharge from bankruptcy. The application was opposed by the trustee in bankruptcy, who asked that it be adjourned pending the examination of certain documents.

The Official Receiver (Mr. Gibson) stated that Mr. Smith was adjudicated bankrupt in November last, upon his own petition. The liabilities ranking for dividend amounted to £302 13s. 9d. The assets had been estimated by the debtor to produce £725 8s. 1d., but book debts estimated at £697 5s. had, in fact, yielded nothing, and the trustee reported that the assets had realized only £18 3s. 1d. Mr. Smith had been involved in two serious law suits. In one a claim was made against him in respect of alleged negligence in carrying out certain work. After the matter had been referred to arbitration the plaintiffs consented to a verdict in the debtor's favour, and paid £750 towards his costs; but he estimated that, in fact, the proceedings in that action had cost him £3,208 11s. 7d. In the second case he claimed fees amounting to £3,000, and by consent judgment was given for £1,250 and costs. It was a barren judgment, owing to the financial position of the defendant company, which was now in the hands of a receiver on behalf of debenture holders.

Mr. Lustgarten, who represented the debtor, said the only creditors were his client's former solicitor and three expert witnesses who gave evidence on his behalf in the first action. But for the litigation Mr. Smith would have been quite solvent. He was obliged to defend the first action because his professional reputation and his future subsistence were at stake.

The Judge said that he was asked to refuse Mr. Smith's discharge, whose bankruptcy was caused solely by misfortune. He looked upon the opposition as mere spiteful opposition. He had considerable experience in bankruptcy matters and of the way in which people got into difficulties, and he was astonished that the application should be resisted by the trustee, when the facts were known. He would give Mr. Smith his immediate discharge.

Light and Air Action

Semon & Co., Ltd. v. Bradford Corporation.

May 3. Chancery Division.
Before Mr. Justice Eve.

This was an action by Messrs. Charles Semon & Co., Ltd., stuff and woollen merchants, of Bradford, to restrain the Bradford Corporation from erecting a proposed electric power-station on the north side of Balme Street so as to obstruct the light from the plaintiffs' warehouse on the opposite side of the street. For the plaintiffs it was urged that this warehouse had been specially erected with windows facing north, as a northern light was of great importance to this trade. The proposed building would materially diminish the light and render the warehouse unsuitable for their business. For the defence it was alleged that the proposed building would be opposite only part of the plaintiffs' warehouse, and would not seriously obstruct the light.

Mr. Hughes, K.C., for the plaintiffs, said the site of the plaintiffs' premises formerly belonged to the Corporation, and was sold to the plaintiffs' predecessors on condition that they erected a first-class building to plans to be approved by the Corporation. The building had six floors with thirty-six windows. Up to the present there had been only low buildings on the opposite side of the road, and there was no question about ancient lights, as that was admitted by the defendants. The road was 45 ft. wide, and the proposed building, which would be 73 ft. high, would seriously interfere with the light of the ground, first, and second floors of the plaintiffs' building. An angle of 45 deg. was generally taken as the standard in these cases, but in this case the angle of light at the lower window would be only 34 deg.

Mr. G. H. Lougee, managing director of the plaintiffs' firm, said they were the second largest house in the trade in Bradford. The general trade of Bradford required a very good light for the testing and matching of delicate colours and shades.

Mr. Walter Jackson, architect and surveyor, said this was one of the best warehouses in Bradford. Light was essential, and the value of a warehouse which had a good north light was greatly enhanced in consequence. The proposed building would take away a very large proportion of light from the lower windows.

Mr. Walter Jackson continuing his evidence said he estimated that the loss of light due to the proposed building would reduce the annual value of the plaintiffs' warehouse by £360, and its selling value by £6,480.

Mr. William Prest, civil engineer and surveyor, of Bradford, put the loss at £6,800.

Sir Bannister Fletcher, architect and surveyor, and an authority on light, said that the lighting of plaintiffs' warehouse would be considerably affected by the proposed building.

The hearing was adjourned.

Edmonton Housing Scheme

We are informed by the Ministry of Health that the report which has been circulated by a news agency concerning the Edmonton Housing Scheme is inaccurate. (This report was printed in our last issue.) The facts are as follows :—

As the result of investigations made by the Department into the working of the scheme it became clear that the cost would be very high. It was consequently decided last year, after investigation on the site, to require the local authority to curtail the contract. In consequence of such curtailment certain materials for which commitments had been entered into were not required, and arrangements were made by the local authority to liquidate these commitments and to sell surplus materials upon the best terms obtainable. Owing to the fall in prices since the date when the materials were bought and the commitments entered into there has been a loss.

On the other hand, expenditure which would have amounted to a very large sum per house over the present cost of houses has been saved in respect of the houses which were not proceeded with.

The Concrete Institute : Annual Report & Year-Book

Great progress is being made by the Concrete Institute. According to the report of the Council, just issued, the past year has been one of the busiest ever recorded, and there has been a big increase in membership. In fact the increase in membership has not been equalled since the years of the Institute's foundation. During the present session (between November 1921 and March 1922) a total of 115 new members in all classes has been elected.

The actual increase in membership during the twelve months has been 150. The net increase for eleven months is ninety-nine, the remaining fifty-one being accounted for by deaths, resignations, removals, lapses, and members provisionally elected.

During the year there have been sixty-two meetings, of which ten were ordinary meetings (including four at Olympia), and the remaining fifty-two were council and committee meetings. This average of two meetings per week throughout the session gives some idea of the amount of time and attention which members of the Council devote to the interests of the Institute.

The Concrete Institute is now represented upon the following bodies, etc. : R.I.B.A.—Science Standing Committee; Joint Committee on Reinforced Concrete; Advisory Committee to the Board of Architectural Education. British Engineering Standard Association.—Conference and Committee on Iron Portland Cement; Conference and Committee on Sand Lime Bricks. Council of the London Society; Royal Commission on Fire Brigades and Fire Prevention; Royal Sanitary Institute Congress; Public Works, Roads, and Transport Congress.

Publication of the year-book has been postponed for a few weeks only, pending certain decisions to be made by the Council. Meanwhile members are asked to communicate any changes in rank, style, or address, to the Secretary of the Institute, at the earliest date.

Members of the Concrete Institute desirous of reading papers before the Institute during the Session 1922–1923 are invited to communicate with the Secretary of the Institute, at 296 Vauxhall Bridge Road, S.W.1. The title of the paper should be stated, a summary of the subject matter should be enclosed, and a suitable date should be intimated. Papers should not exceed 10,000 words in length for printing, and are subject to approval by the Literature Standing Committee.

Examinations, Part I for graduateship and Part II for associate membership, will be held in London and at other centres as may be arranged, on Thursday and Friday, May 18 and 19. A syllabus and full particulars may be obtained on application to the Secretary.

The Week's News

Hampstead War Memorial.

Major-General Sir Charles Townshend ıs unveiled the Hampstead war memo-al, which has been erected opposite .ck Straw's Castle.

Southport War Memorial.

The Earl of Derby has unveiled war emorials at the parish church of St. ɔhn, Ainsdale. An oak reredos and a arble tablet are the main features.

Architect's Change of Address.

Mr. W. Harding Thompson, A.R.I.B.A., ıs taken new offices at 5 Verulam Build-gs, Gray's Inn, W.C. Telephone: ıancery 7807.

Stained-glass Windows for Colchester.

Colchester Town Council has decided to ace three stained-glass windows in the ɔwn Hall to commemorate Lord and ady Cowdray's long association with the ɔrough.

New Bungalow at Torquay.

For the erection of a bungalow on the ɔrbay Hall Estate, Torquay, the tender Messrs. E. P. Bovey and Son has been ɔcepted at £1,769 12s. 6d. The archi-ɔct is Mr. Francis C. R. Johnson, of ɔrquay.

Electricity Developments at Southport.

Important developments of the Cor-ɔration electricity estate are in imme-ate prospect. Application is to be made r sanction to borrow £140,000, half of hich is for expenses already incurred, d the remainder for new extensions and uipment.

onolithic Design of Reinforced Concrete.

Mr. R. J. Harrington Hudson informs that his book on the new method of onolithic design of reinforced concrete referred to by Mr. E. Fiander Etchells an address at Olympia, which was ported in our issue for April 26—is ing published by Messrs. Chapman and all.

Northern Polytechnic Institute.

An exhibition of works selected from e 1921 competition held by the National int Education Committee for Painting d Decorating of England and Wales is w being held at the Northern Poly-chnic, Holloway Road, N.7. The ex-bition will be open daily from 9 a.m. to ɔ.m. (admission free) until May 24.

Two Old Lincoln Inns.

Two famous old inns at Lincoln are to , the magistrates having referred for mpensation "The County Arms," where mes I stayed and civic feasts were rmerly held, and the "Black Boy" on stle Hill, said to be 600 years old, where arwood, the hangman, used to stay on s official visits to Lincoln.

The Rodney Stoke Inn : A Correction.

We published in our last issue a view the Rodney Stoke Inn, Somersetshire, e architect for which was given as the e J. Spire. This, we regret to say, was error due to a misunderstanding on the rt of our informant. The architect was C. F. W. Dening, F.R.I.B.A., W.A., of Bristol.

Lincoln Cathedral.

Speaking at the Alpine Club, the Dean of Lincoln said he intended to propose at the next meeting of his committee that the grouting machinery should be doubled With regard to the appeal for £50,000 to carry out the repair and restoration work, he expressed the hope that those present would make the appeal known. There was no doubt that every penny of the £50,000 would be required.

Architectural Partnership Dissolved.

Mr. J. Edward Rowlands, M.S.A., Lic. R.I.B.A., architect and surveyor, late of 20 Exchange Street East, Liverpool, desires to intimate that the working arrangements existing between Mr. Edmund Ware, architect and surveyor, of the same address and himself have been discontinued, and that he will continue in practice at 10 North Crescent Chambers 3 Lord Street, Liverpool. Tel. Nos.: B'head 503; Central 1706.

Statue of Lord Haig for Edinburgh.

Lord Provost Hutchison, at the last meeting of the Edinburgh Town Council, announced that an equestrian statue of Lord Haig had been offered to the city by a wealthy Indian gentleman. The Provost, with the cordial agreement of the Council, accepted the statue, which is to be erected in front of Usher Hall. It is hoped that the unveiling ceremony will be performed by the Prince of Wales in September.

Bournemouth Town Hall.

The final figure of the cost to the town of the purchase and adaptation of the Mont Dore Hotel for use as a Town Hall has been reported to the Corporation. The purchase money was £33,550, conversions and additions cost £46,250, and furnishings £2,750, making a total of £82,550. The question of the provision of electric runabouts on the Undercliff Drive is still under consideration by the Corporation.

Architects' and Surveyors' Assistants' Professional Union.

Subject to ratification by the branch committees, the Executive Council of the Architects' and Surveyors' Assistants' Professional Union have appointed Mr. John Mitchell, Jnr., as full-time general and organizing secretary. Mr. Mitchell is a measurer (quantity surveyor), and has for the past two years acted as honorary divisional secretary for Scotland, where he has been largely instrumental in firmly establishing the Union.

Trade Openings in the Netherlands.

H.M. Consul-General at Rotterdam has forwarded to the Department of Overseas Trade some interesting particulars of projected works in the Netherlands, which may lead to openings for British trade. The works include a large electric power station near Utrecht; railway lines, tipping wagons, and a locomotive or motor lorry for Zaandam; telephone exchange and electric power station for Rotterdam; pumping installation for Hengolo; pumping station, cables, and boilers for Amsterdam; and a water tower, Diesel, and pumps for Flushing. Further particulars may be obtained from the Department of Overseas Trade, Room 84, 35 Old Queen Street, Westminster, S.W.1.

3,400-Year-Old Tomb.

While ploughing in a field at Borewell Farm, Berwick, a horse put its foot into a hole, which, on being examined, was found to contain a cist of the usual type, consisting of a cover and four sandstone side slabs. There were also parts of an urn, which were sufficient to show that it had been of the beaker or earliest type of the Bronze Age. It is computed that it dates from about 1500 B.C. Two small flint flakes also discovered in the cist show signs of manufacture. One is of the type known as "thumb scraper," which served the purpose of a chisel.

Cement for South Africa.

His Majesty's Trade Commissioner at Cape Town has informed the Department of Overseas Trade that the Kamanassie Irrigation Board, Oudtshoorn, is inviting tenders for the supply of 100,000 bags, or 50,000 casks, of Portland cement, of quality equal to British Standard Specification. Copies of the specification and forms of tender may be inspected by United Kingdom firms interested on application to the Department of Overseas Trade (Room 41), 35 Old Queen Street, London, S.W.1.

Future of Irish Architecture.

Speaking at the annual dinner of the Institute of Architects held in Dublin on April 27, under the presidency of Mr. L. O'Callaghan, Mr. J. J. Walsh (Postmaster-General) said he thought it was right that before the G.P.O. was rebuilt the Institute of Architects should be consulted. His department would give the architects every opportunity for the development of a national architecture. There were few towns, no cities, and as far as he knew no villages that did not need rebuilding, improvement, and beautifying.

24th Division War Memorial.

At the officers' reunion dinner of the 24th Division held in London last October it was decided to erect a war memorial at Le Verguier, in France. A committee was elected to make the necessary arrangements, and the work is now being carried out. The design is so striking that the committee is of opinion that a large majority of the Division would prefer to have the memorial permanently erected in London. Mr. P. T. Chevalier, secretary of the 24th Division War Memorial Committee, of The Lodge, Great Bealings, Suffolk, will be glad if officers, non-commissioned officers, and men who served with the Division will let him know whether, if a suitable site can be obtained, they would prefer the memorial to be erected in London or in Le Verguier as originally arranged.

The Late Mr. A. J. Wells.

We deeply regret to have to record the death of Mr. A. J. Wells, M.Amer.Soc. H.V.E., who passed away on April 17 from cancer, after a very painful illness lasting three months. Mr. Wells was an acknowledged expert on heating and ventilating, and had contributed some very able articles on these subjects to our columns.

Society of Architects' "Victory Scholarship."

The Society of Architects' "Victory Scholarship," which was an all-round success in 1921, promises to be even more successful this year. The scholarship is open without entrance fee to any British subject under thirty-five years of age. For the convenience of country candidates, centres are in course of formation under the auspices of the schools of architecture in Liverpool, Sheffield, and other districts. Entries close on May 17. Intending candidates should apply at once to the Secretary of the Society of Architects, 28 Bedford Square, W.C.1, for an entry form and syllabus.

Royal Exchange Panels.

The series of historical panels for the ambulatory of the Royal Exchange having now been completed, the Gresham Committee have decided to fill eight smaller spaces on the walls with portraits of eminent citizens memorable in the earlier banking and commercial annals of the City of London. The first of these—that of John Julius Angerstein (1735–1823), who is commonly known as "The Father of Lloyd's"—has been unveiled by the Lord Mayor. The portrait is a reproduction of one by Sir Thomas Lawrence, R.A., in the Louvre. Angerstein, who was of Russian origin, came to London in 1750, amassed a large fortune as an underwriter, and died in 1835. He was also a famous art collector, his pictures being the nucleus of the National Gallery.

Legros and Marston Exhibitions.

An exhibition of the work of Alphonse Legros will be opened at the Grosvenor Galleries, New Bond Street, early this month. The paintings, drawings, etchings, lithographs, and bronzes will be selected from the collection of Mr. Frank E. Bliss, and will form the most complete group of the artist's work ever brought together. It was on Whistler's advice that Legros left France in 1863 for England, where he settled and remained until his death in 1911. From the first he became known to Rossetti and his circle, to Watts, Leighton, and the other leading artists of the day. He showed work at the Royal Academy, among other important exhibitions in London, and as Slade Professor his influence on modern art was far-reaching.

Mr. George Marston went to the Antarctic with the late Sir Ernest Shackleton in the ill-fated expedition of 1914–16, and after the "Endurance" was crushed in the ice he managed to save about ten of his drawings. These historic water-colours, with a few others completed on Elephant Island while the explorers were waiting to be rescued, will also be shown at the Grosvenor Galleries.

Cheaper Building.

A correspondent in "The Times" says: "Up till last year porcelain enamel baths in cast-iron cost from £11 to £12 each, but early in 1920 a consignment of baths was received from Germany and retailed at £7 to £8 each. Later, in 1921, a larger consignment was received, and sold at a slightly cheaper price, and in response British manufacturers are now offering the same class of goods (or probably of rather better quality), at between £6 and £7 each. This shows that we can hold our own against Germany, even at the existing rate of exchange, but the manufacturers have appealed before the Board of Trade Committee sitting under the Safeguarding of Industries Act.

At an inquiry held at Old Palace Yard, Westminster, on January 23, Mr. John King, chairman of the Light Castings Association, said the association penalized merchants who sold these German baths to the extent of 7½ per cent. on the other goods they bought from the association. The chairman of the committee asked if this 7½ per cent. was not sufficient protection. The reply was, "I do not think so."

"It really seems that the British manufacturers are at last trying to bring down war-inflated prices, and are trying to do so in the only proper way—*i.e.*, by reducing cost—for the writer has been offered some baths at prices between £6 and £7 delivered ex works, but not ex London stock. The merchant who made this offer informed the writer that the manufacturers allow a small profit to merchants for each bath sold, but cannot allow a trade discount sufficient to supply ex London stock. Such cheapening of costs is better than a protective tariff, which would be paid by the builder and passed on to the public, and only benefit the manufacturers."

London Assurance Offices.

The newly completed premises of the London Assurance Corporation occupy a triangular site at the western end of King William Street, overlooking the church of St. Mary Woolnoth, and within a stone's throw of the Mansion House. The interior has white marble pillars, mahogany woodwork, and other ornamental features. Planned on strictly utilitarian lines, the building houses an enormous staff. There are six floors above ground and three below. In the lowermost of the latter are placed the engines which manufacture and pump ozonized air into every room in the building, which manufacture electricity for light and power, and which raise the water from the corporation's own artesian well; there are also the boilers for central heating. A feature of the main landing is the collection of historical records of the corporation, dating back for two centuries, which are displayed in glass cases.

International Theatre Exhibition.

The final arrangements for the International Theatre Exhibition, which is to be held at the Victoria and Albert Museum with the co-operation of the British Drama League, the Actors' Association, and other societies and individuals connected with the stage, are now being completed. The whole of the exhibits from the recent exhibition at Amsterdam have been received at the Museum, and considerable additions have been made to the British, American, French, Italian, and other sections. A dark-room is being fitted up to contain about 100 lighted models of theatre scenes. The catalogue is now in course of preparation, and it is hoped that the exhibition will be opened on June 1 or 2. Information with regard to the nature and scope of the exhibition can be obtained from the following members of the Publicity Committee: Messrs. St. John Ervine, 9 Arcade House, Temple Fortune, Hendon, N.W.; Ivor Fraser, Electric Railway House, Broadway, Westminster, S.W.1; E. O. Hoppé, Millais House, Cromwell Place, S.W.7; Walter Payne, 25 Charing Cross Road, W.C.2; Horace Shipp, "Theatre Craft," 4 Bloomsbury Place, W.C.1; Geoffrey Whitworth, The British Drama League, 10 King Street, Covent Garden, W.C.2; and Martin Hardie, Victoria and Albert Museum, South Kensington.

Competition News

Prize Designs for £100,000 Pavilion.

Bournemouth Corporation have decided to advertise a competition for plans for a pavilion on the site opposite the pier entrance, to cost £100,000. Prizes of £300, £200, and £100 are to be offered for the best designs.

Dundee War Memorial.

In the competition for the war memorial to be erected on the Law, Dundee, 125 architects submitted designs. The awards of the assessor, Sir Robert Lorimer, are as follows:—

First Premium.—£250: Mr. Thomas Braddock, 8 The Ridgeway, Wimbledon, London.

Second Premium.—£150: Mr. A. S. Turner Ariba, 11 Beechcroft Avenue, Golder's Green, London.

Third Premium.—£100: Messrs. Hicks and Charlewood, Architects, 4 Mosley Street, Newcastle-on-Tyne.

The total cost of the memorial is not to exceed £12,500.

(*For List of Competitions Open see page* xxvi)

Correspondence

Unification & Registration Committee

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—With reference to the memorandum issued by the above committee, I think all members of the R.I.B.A. should bear in mind the fact that there is a very large majority of men on that committee who represent architects who do not belong to the Institute but who naturally want to come in without passing any examination. Our Kalendar shows the committee consists of sixty-seven members and less than twenty of that number represent members of the Institute. Can you wonder at the result? It is no answer to say that some of the members of the committee who represent outside architects are themselves members of the Institute, they are sent to that committee to represent outside men, and very well they do it; but I think our own members should realize these facts and discount the value of the memorandum according.

SYDNEY PERKS.

Trade and Craft

Simplex Middlesbrough Agency.

ssrs. Arthur Jones & Co., of Middlesgh, have been appointed sub-agents iddlesbrough and Tees-side under the lex and Credenda Joint Sales Ser- Adequate stocks of the manufac- of both Simplex Conduits Ltd., and enda Conduits Co. Ltd., are now able at this address.

Cafferata Partition Slabs.

brochure published by Messrs. rata & Co., Newark-upon-Trent, an interesting and profusely-illusd description of the firm's partition . It also provides evidence, in a s of progressive photographs, of the l with which Cafferata can be ed. The first photograph shows the ior of a works, without partition, the five succeeding pictures show the ress of erection by half-hourly es. The partition was completed in and a half hours. Copies of this hure, "The Rapid and Economical tion of Interior Walls and Parti-s," will be forwarded by the manurers to interested readers on appli- to the company.

Fiberlic.

me of the many important advans to be secured by the use of "Fiber- for walls and ceilings are clearly set in a new folder which has just been ed by Messrs. MacAndrews and oes, Ltd. Fiberlic is manufactured in ral sizes and thicknesses, and is ned to be highly fire-resisting, mois--proof, heat and cold resisting, and excellent sound deadener. The mate- is very easy to erect and requires no ering. When the sheets are erected joins are covered with wooden strips, the result that an artistic panelled t is secured. Good paint, distemper, varnish may be used to complete decoration. A sample of Fiberlic may obtained from the company at 65 th Molton Street, W.1.

ew Premises for Percy C. Webb, Ltd.

a few weeks' time Messrs. Percy C. bb, Ltd., of St. Katharine Docks, don, marble merchants, will move to r commodious new premises at the ble Wharf, Verney Road, Old Kent d, on the Surrey Canal. The wharf ers an area of nearly an acre, with a ntage of about 80 ft. to the Surrey al. It has a substantial building ut 181 ft. long by 62 ft. wide. This burnt down some few months ago, is now being reinstated. The move is le necessary by the steady growth of business, both in rough and manucured marble. With the increased lities and accommodation available at ney Road the firm should go still her ahead. Work is now proceeding ce on the office and works buildings. plans allow for a large showroom the monumental side of the business, ensive masons' and polishing shops h the latest and most up-to-date elecal machinery, well-lit drawing and eral offices, and also a comfortable sulting-room for clients. The plant n the present premises, both at ston and the Docks, will be moved, and further saws, polishing machines, and cranes installed. The welfare of the staff will not be overlooked : a large mess-room is to be provided for the workmen, while a rest-room and library is allocated for the use of the office folk. When all is settled Messrs. Percy C. Webb, Ltd., will have one of the finest marble yards in London, if not in England.

Light in the Home.

The British Commercial Gas Association have rightly chosen the spring cleaning season in which to publish an interesting domestic lighting booklet entitled "A Thousand and One Uses for Gas," No. 98; for if it is desired to improve the gas lighting arrangements of the house, that season provides the best opportunity to have the alterations effected with a minimum of trouble while carpets are up and rooms dismantled, and before walls and ceilings are cleaned or re-decorated. All who wish to gain an idea of the possibilities of gas lighting, both in beautifully furnished and in more homely rooms, should write for this magazine, which will be sent (6d. post free) on application to the Secretary of the Association at 30 Grosvenor Gardens, S.W.1.

Sanitary Fittings.

Messrs. Mellowes & Company, Ltd., have sent us their recently published catalogue of sanitary fittings, together with a copy of a small booklet issued to the public at the Building Exhibition. The catalogue embodies some of the firm's specialities and recent improvements, and is priced right up to date. There are spray and plunge baths, lavatories, glass mirrors, toilet requisites, water-closets, slop, scullery, and pantry sinks, and kitchen, pantry, scullery, and still-room equipment, all shown in the latest designs and of first class workmanship and the highest efficiency. The booklet is to be commended as a noteworthy attempt to interest the public in architecture and to impress upon them the importance and value of the architect's special qualifications. The company truly state that "it is quite certain that the British public does not perceive so clearly as it should the value of architecture or its influence on our national life." The address of the company is 26 Victoria Street, Westminster, S.W.1.

Modern Street Lighting.

Present-day traffic conditions demand a very high order of street lighting, and in endeavouring to produce this illumination in the most economical manner, illuminating engineers have thoroughly investigated the principles involved. Their task has been facilitated by the perfection of the gas-filled lamp, which has placed in their hands lighting units of low current consumption, available in sizes from 30 watts up to 1,500 watts. A lamp can therefore be chosen which, when combined with a suitable reflector, will give exactly the illumination and distribution required. A new bulletin (No. 15) entitled "Street Lighting by Gas-filled Electric Lamps" has just been issued by The General Electric Co., Ltd., of Magnet House, Kingsway, London, W.C.2. This publication is a complete handbook on modern street-lighting practice, and in addition to valuable technical data contains particulars of very complete ranges of lanterns suitable for every street-lighting requirement. Noteworthy features of the bulletin are the polar curves and illumination data provided for the more important types of lanterns, and the very full instructions for calculating the size of lamp required. Although equipment covering most street-lighting requirements is described in the bulletin, we understand that the services of the Illuminating Engineering Dept. of the G.E.C. are always available to co-operate in planning new schemes or converting existing installations. The bulletin is now being circularized, and additional copies are available on application to Magnet House, or any of the company's provincial branches.

"World-Wide Publicity."

We have received a copy of "World-Wide Publicity," which has just been published by Messrs. Fredk. E. Potter, Ltd., of Imperial House, Kingsway, advertising agents and experts. It is brought out in celebration of their semi-jubilee, it being twenty-five years since the business was started by Mr. F. E. Potter, who is still in active management. All who are interested in advertising (and who is not in these days ?) will find much of interest in this brochure. There are not only detailed the methods by which up-to-date publicity is obtained, but there are many reduced facsimiles of advertisements placed by this agency in various parts of the world. Perhaps the most impressive part of the publication is that which contains copies of thirty-five testimonials received from clients of the firm, including the considered opinions of a number of houses famous throughout the world for their advertised products. These testimonials are of such an emphatic character as to afford in themselves a remarkable tribute to the efficiency of the service provided by Messrs. Fredk. E. Potter, Ltd.

Architects and the R.E.'s Proposed Presentation

At a dinner recently given at Chatham by the Royal Engineers to members of the engineering, surveying, and architectural professions who held temporary commissions in the Corps during the war, appreciation was expressed of the great services which these members of the professions had rendered to their country and to the Corps from 1914 to 1918. A presentation to the headquarters mess of the Royal Engineers from all temporary officers who had served in the Corps was suggested amongst those present at the dinner, and the idea has now taken definite shape. The Council of the R.I.B.A. has authorized the formation of a committee, of which Mr. Maurice E. Webb, D.S.O., M.C., is hon. secretary and treasurer, to organize an appeal for subscriptions amongst temporary officers of the Royal Engineers now returned to civil life. The great engineering, surveying, and architectural societies are being invited to appoint representatives to the committee. By this means it is hoped that the greater part of the ex-Royal Engineer officers will have an opportunity of subscribing to the memorial gift which it is proposed to make to the Royal Engineers' mess.

New Inventions

Latest Patent Applications.

11292.—Garratt, H. H.—Pivoted metal casements for windows and doors. April 21.

10961.—Hall, E. E.—Suspended ceiling. April 19.

10989.—Laugsen, N. K.—Cement mould for chimneys, etc. April 19.

10935.—Rutter, G. — Dwelling-house chimneys. April 19.

Specifications Published.

177990.—Mejer, E. C.—Impregnating composition for the cure of efflorescence in brick, mortar, and plaster walls.

174067.—Loman, R.—Method erecting blocks of buildings.

Abstract Published.

176275.—Walls.—McLean, D., 145 Howdon Road, North Shields.—In the wall described in Specification 153758 and formed of blocks or slabs comprising concrete-faced wooden frames bolted together and the whole concreted over, precast independent concrete ribs or stanchions with dove-tailed sides are inserted in the horizontal or vertical joints and are united to the concrete covering by strips of expanded metal cast in the ribs. The ribs or stanchions may be made in short lengths butted together. Felt packing-strips are placed between the blocks and ribs, and the spaces adjacent to the dovetailed sides are grouted. The stanchions and woodwork may be perforated for air circulation.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

Digging Gravel for Concrete

Mr. E. F. Sargeant, A.M.Inst.C.E., M.Inst.M.E., M.C.I., in reading a paper on "The Preparation of Concrete Aggregates" before the Concrete Institute, described the dragline, an appliance little known in England, which, he said, is particularly suitable for digging gravel for concrete purposes. Mr. Sargeant, who first introduced the dragline into this country, stated that it consisted of a cableway, one end of which was supported on a lofty mast and the other end of which was anchored to the ground 500 ft. or 600 ft. away. A massive steel scoop ran on this cableway. The track cable terminated at the mast in one of a pair of three-sheave blocks, round which a tension cable passed. By slackening out this tension cable the track cable could be made to touch the ground at any point where the bucket happened to be. A tractor cable was secured to the bucket and passed over the pulley at the top of the mast on to a two-drum winding engine, and the second drum took the tension cable.

Imagine that the bucket was resting on the ground which it was desired to excavate, and that the tractor cable was pulled in; the bucket forced itself into the material, being provided at its front edge with manganese steel teeth, and speedily filled itself. When it was nearly full the second drum of the winding engine was put into motion, thus winding in the tension cables and lifting the bucket out of the ground. As the bucket left the ground its speed was increased, and it was hauled rapidly up the slope of the track cable to the top of the mast. The bucket was hung from a carriage by an arrangement of pulleys and chains in such a way that when it met with a stop clamped to the track cable it was up-ended and made to discharge its contents into the gravel-preparing plant; it was then allowed to run down the slope of the cable gravity, and was stopped at the digging spot.

The buckets were made of various capacities from ¼ yd. to 2 yds., and the span might be anything up to 900 ft. The height of the mast should be one-seventh of the span, and masts were usually in steel for the heavier equipment, although for smaller spans and equipment a mast of trussed timber would suffice. The masts usually required six guy ropes, preferably at an angle of 45 deg. to the ground, and the anchorages needed very careful attention. Where the deposits were shallow it was preferable to anchor the outward end of the track cable to a bridle cable, the anchorages of which were perhaps 120 ft. apart; the track cable could be made to travel along this bridle cable by a pulley-block arrangement, so that this track cable could operate over a segment of a circle having a chord of 120 ft., and an enormous quantity of stuff could be dug without fresh anchorages. For the actual digging one man at the winch was sufficient, and thirty to forty trips per hour could be made, forming, therefore, one of the most economical ways possible of working a sand or gravel deposit, the gravel being delivered automatically into the screening and washing plant.

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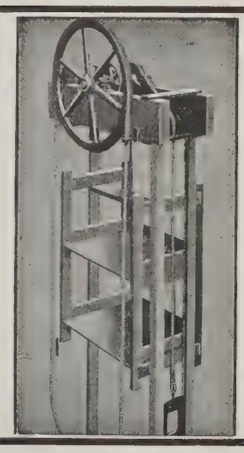

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THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

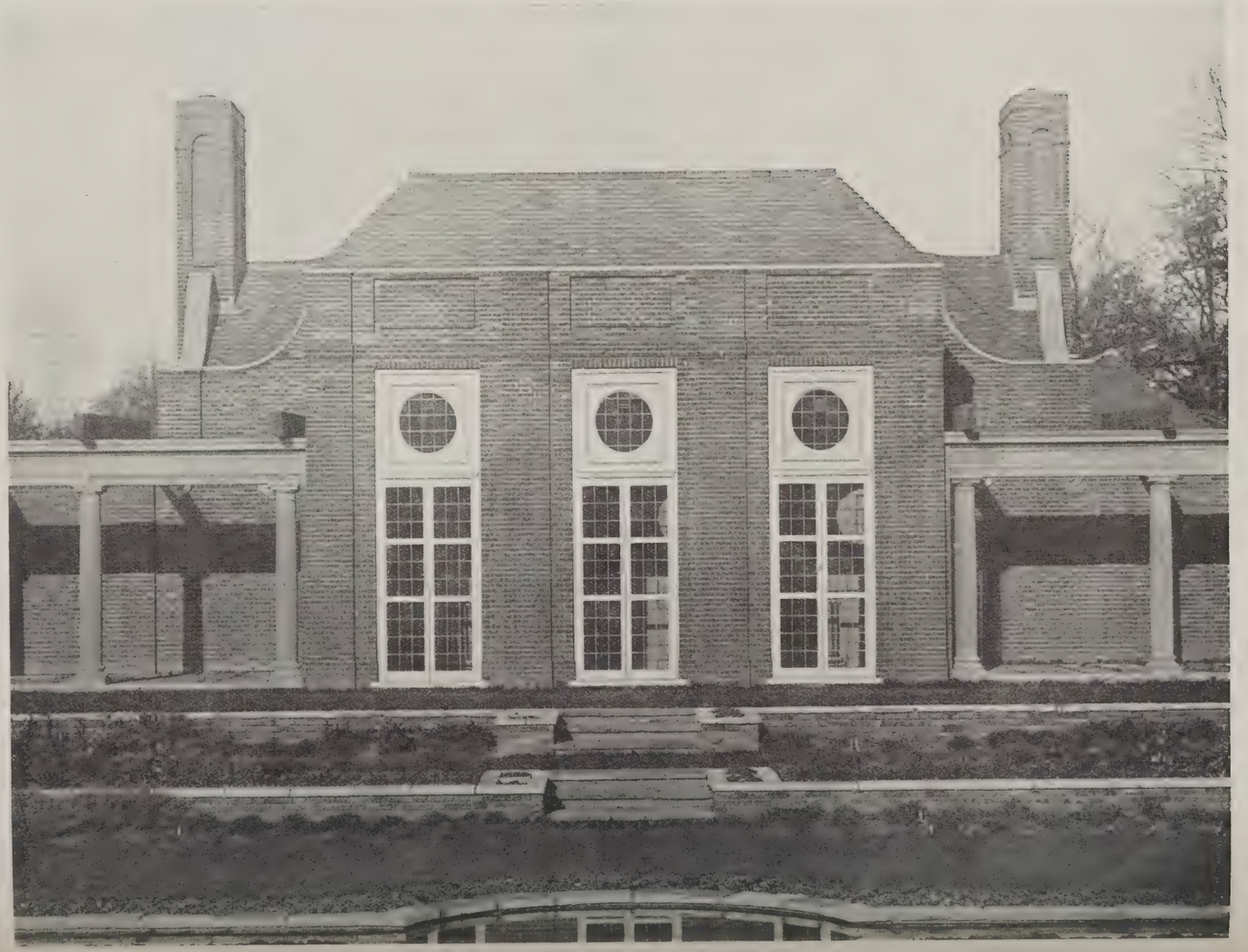
DUNDEE WAR MEMORIAL COMPETITION: WINNING DESIGN.
THOMAS BRADDOCK, ARCHITECT.

In this competition, the full awards of which were announced in our last issue, 125 designs were submitted, the above scheme receiving the first premium of £250. Sir Robert Lorimer was the assessor. The cost of the memorial is not to exceed £12,500.

27-29 Tothill Street, Westminster, S.W.1.

Modern Domestic Architecture. 36.—Bracken Hill, Northwood : The Garden House

C. H. Biddulph Pinchard, F.R.I.B.A., Architect



The garden house shown above comes midway on the right-hand wing facing towards the formal garden (see plan on page 717). It forms a charming feature in the general ensemble, which includes a number of separate buildings connected to the main house by covered ways or wide loggias.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

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The Place of the Unattached Architect in Unification

IN view of the great amount of loose criticism directed against the imaginary details of a scheme that has not yet been put forward, the Council of the Royal Institute has taken a wise preliminary step in publishing a statement drawn up by the Unification and Registration Committee on the general question of the principle of Unification in the architectural profession—what it is, what it may effect, and what it does and does not involve. What it is, is defined as a grouping into an organic whole within the R.I.B.A. of the professional members of the various architectural bodies and the worthy and bona-fide architects who do not belong to any organization. Its effect is to give force and direction in matters of public action, to improve the national architecture, to foster education, and to prepare the way for Registration by Statute. It involves the acceptance by the Institute of the responsibility for guiding, controlling, and representing the whole profession. It does *not* involve the inclusion of any but reputable men or any who follow callings other than that of an architect or an architect and surveyor.

That the movement is a democratic one is shown by the facts that it arose out of a general demand throughout the profession, that the Committee dealing with it represents every section of the profession, and that a postal vote on the scheme, when evolved, is to be taken from all members of the Institute.

At present we have the broad principle alone; the scheme itself, the actual means to be used to bring about Unification, does not, apparently, exist at the present time, and all statements as to its effect on this or that class and as to its bearing on the standing of the Institute are therefore beside the mark.

The critics of it claim to believe in Unification, but they ask for it to proceed from a Registration Act; apparently, as Unification under some central body independent of the Institute. Their chief ground of objection to the Committee's proposals is the injury that they think may be suffered by the Institute through the admission of unattached architects and others of inferior calibre.

Let us state at once that the Institute regards as architects none but those who can be shown to possess proper qualifications for their professional work, and takes no cognizance of the man who becomes an architect merely by calling himself one. Who are the unattached architects from whom such injury is anticipated? In the first place we may refer to the numbers of those who having passed the Intermediate Examination of the R.I.B.A., proceed no farther, or, sitting for the Final, fail to pass. They join some other society or continue "unattached"; but of them it may be said that they have been ascertained to possess the required general education, that they are presumably men of the right class for the profession, and that they are definitely students of the art of architecture. Many of them who served with the colours during the war have been admitted as Associates without further test. Then there is the very considerable number of men of the class represented, for instance, by the late Philip Webb—artists to the backbone, and architects of outstanding ability, but men who do not readily join clubs, societies, or professional associations. They would confer honour on any class to which they were admitted. Then, again, we have the numbers of men up and down the country who have drifted early into practice, busy and independent, too much occupied or too old for examinations, reputable people and capable, and not unwilling to come in if the proposal is laid before them. Further, there is the large class of permanent assistants, many of them artists of great ability, for whom a place should be found; and lastly, there are those on the border line both of attainment and of position, whose qualifications would have to be closely scrutinized—a duty that would need to be borne in great measure by the societies in the provinces.

The task of selecting and placing must necessarily be difficult, and the scheme under which it is to be carried out must be evolved with due caution and care. The genuine architect alone is the man to be sought and accepted, and upon the face of it there should not be much difficulty in making proper provision for all. In the case of some there would be no question as to their suitability for admission to any class; they are well-known men. In some cases a special examination may be desirable, and in others the man's executed work and the record of his career must form the ground of his admission or rejection.

Whatever the course or courses that may be adopted, our view is definitely that the professional standing of those who constitute the Unification Committee is a safeguard against injury to the Institute. Presidents and past-presidents of the Institute and its allied societies, men who have done much already for their profession, and are ready to do more, can be trusted not to neglect its well-being. They are men of affairs, of wide experience, not likely to be led by young enthusiasm into dangerous courses! Many of them have been in touch with past schemes for Registration, and know very well what is involved in it. When they say that without Unification as a preliminary step Registration is a mere vision, their word may be accepted; indeed, this is obvious to all who know anything of Parliamentary procedure. When they insist on Unification as an end well worth attainment in itself, they realize the possibilities that lie before the profession when all the loose forces in it are combined for common effort. These possibilities are so great and so far-reaching that efforts directed against the proposal before the time comes for the scheme in all its details to be laid before the profession may result in great injury both to the art of architecture and to the profession of an architect, and may prevent the Institute from taking the position that rightly belongs to it—that of representing and guiding the whole of a great profession.

Notes and Comments

Rebuilding Moscow

THE exceedingly well-informed London correspondent of the "Manchester Guardian" gives, in the issue of that paper for May 11, some interesting information on the arrangements for rebuilding work in Moscow. Since the revolution, our contemporary observes, "Moscow, which is largely built of wood, lath, and plaster, has fallen into a terrible state of decay. Many thousands of its population have deserted it, and empty houses have been pulled down everywhere for burning the wood." Under the concession which Colonel Frederick Cripps, son of Lord Parmoor, has obtained from the Soviet authorities, the Beecham Trust will undertake the work of reconstruction, which will cost many millions of pounds—about two millions and a half will be spent in rebuilding houses in the first year; and the Trust, according to our Manchester contemporary, will arrange, in co-operation with the Overseas Trade Department, for the transport of large quantities of building materials, "although it is expected that a very large amount of timber, cement, and so on, can be obtained in Russia." It is said that the Germans, who have secured a similar concession in Petrograd, tried hard to get this Moscow concession also. That they did not succeed may mean much for the future relations of Russia and Britain; but just now the British builder's merchant will be well-advised to ascertain as accurately as possible whether Moscow's financial foundations are firm and safe enough to build hopes upon.

Higher London Buildings Banned

The advocacy of higher London buildings does not prosper. Architects and hygienists are, almost without exception, strongly opposed to the un-English idea of making old London a second New York in the matter of tall buildings. In this respect the average Londoner is thoroughly in accord with architectural and hygienic opinion. He hates gawky buildings. He has no use for them, regarding them as simply a profiteering proposition; and happily we have not yet arrived at a stage of civilization at which profiteering has become indisputably the ruling passion. In a letter to "The Times" of May 10 Sir Aston Webb, P.R.A., makes the position quite clear, and immediately following his communication is one from Sir Ernest George, R.A., restating certain strong objections to overgrown buildings. Sir Aston explains that his own remarks on the subject at the Royal Academy banquet were made in reply to a portion of the Archibishop of Canterbury's speech deprecating the erection of higher buildings in London. "My belief," Sir Aston adds, "that for the moment the proposal has been stopped arose from the fact that the question of higher buildings for London was fully debated at a special meeting of the Royal Institute of British Architects on March 6, when the proposals of the committee in favour of higher buildings were defeated by seventy-nine votes to eight." Sir Aston adds the useful reminder that the Building Act, while restricting the height to 80 ft. plus two stories in the roof, gives the London County Council power to permit a greater height in special circumstances, and the Institute has felt that this power should remain unaltered. For his part, Sir Ernest George believes that "few realize how much we should lose in beauty and in healthful conditions if our buildings rose to 120 ft." or more. "The ground and lower floors," he says, "would be permanently in shadow, much sky would be lost, and the atmosphere would be of that raw and lifeless kind that never gets the sun into it. In certain seasons the draughts between the high, shadowed walls would be so great as to carry away the cloak or draperies of foot passengers. We cannot afford to make our streets wider. In Regent Street, where the tall buildings have already come, we feel how great was the need for an extra width of road if it had been possible." Those two letters from two of the our most eminent living architects are also representative of general architectural opinion. For example, a correspondent, writing to us on a different substantive theme—namely fire-resistive construction—advances as a side issue the reasonable contention that high buildings are a very serious menace to the buildings adjacent to them, and therefore increase the fire insurance premiums of buildings. It may be here added that tall buildings would increase, also, the expenses of the main-drainage system, which would be subjected to much extra pressure and, consequently, to greater wear and tear. Further, it would be necessary to make provision for a high-pressure water supply, which would be costly to install and to maintain; otherwise it would be impossible to cope with outbreaks of fire in the upper stories. Architecturally, tall buildings are bound to lose value by being so extravagantly disproportionate to natural objects, such as trees—and to buildings, such as St. Paul's, the Abbey, and the Houses of Parliament—which they might obscure and would certainly dwarf independently of close proximity. To the profiteering proposal, then, for tall buildings that are confessedly and rather insolently declared to be only a mild instalment towards skyscrapers, architectural opinion opposes an indignant negative, of which, we are sure, the lay Londoner will as emphatically approve. But while there are very strong objections to the indiscriminate erection of skyscrapers, there is no reason why higher buildings should not be introduced on carefully selected sites—such, for example, as the embankment on the south side of the river, facing parks, and other appropriate positions. If a plan could be prepared under the auspices, say, of the London Society, showing possible sites for a series of focal buildings of an increased height, a valuable service would be rendered to the cause of London development.

The Site for London University

The wrangle about the site for London University has broken out afresh. Captain Swinton, having set his heart on Holland Park, is riding this hobby pretty hard in the current "Nineteenth Century," and he is backed by a "Times" leader-writer. To Captain Swinton, Professor A. W. Pollard replies that "after all, the University is not asking the County Council to provide it with a site; and it cannot quite understand why, in the name of economy, the County Council should require the University to throw away a valuable site in order to go begging for land elsewhere." Professor Pollard adds the assurance that "the University is not anxious to abandon its freehold for the sake of becoming the tenant-at-will of Spring Gardens." He adds the backhanded compliment—not altogether undeserved, yet not making for genial agreement—that "It is, of course, all to the good that the Council should be thinking of its responsibilities as the Education Authority for London," but that hitherto its recognition of its responsibilities to the University of London has not extended beyond the fraction of a farthing." That is decidedly "a nasty one." As we have said before, an ideal solution of the site difficulty would be the erection of headquarters for the University on the Bloomsbury site, of which the Government has made them a present, and the erection of a teaching and residential University at Holland Park. Until Captain Swinton is prepared to recommend his Council to atone for its neglected duty towards London University by making it a present of Holland Park, it were better if he held his peace. At present he is merely stirring up strife, engendering hesitation, and thereby delaying building operations. Meanwhile Paris is getting on with her "University City," which at this rate will very likely be ready for the inaugural ceremony before the Londoners have finished quarrelling about their site.

Architects in Popular Literature

By F. R. JELLEY, A.R.I.B.A.

". . . The story, as Boon planned it, was to begin with a spacious Introduction. We were to tell of the profound decadence of letters at the opening of the Twentieth Century. . . 'Except for a few irresistible volumes of facetiousness the reading public very obediently followed the indications of authority in these matters, just as it had followed authority and sustained the Giants in the great Victorian days. It bought the long-neglected classics—anything was adjudged a classic that was out of copyright—it did its best to read them, to find a rare smack in their faded allusions, an immediate application for their forgotten topics. It made believe that architects were still like Mr. Pecksniff and schoolmasters like Squeers, that there were no different women from Jane Austen's women, and that social wisdom ended in Ruskin's fine disorder'. . ."
"Boon," by H. G. Wells, Chapter the Third, §1, pp. 59–62.

ALTHOUGH wholly delightful from a literary point of view, Charles Lamb's "Dissertation on Roast Pig" is disappointing as a recipe for the actual preparation of that delicacy when compared with the manual on "Everyday Cookery" by Mrs. Beeton. In like manner, most references to the art of architecture and its practitioners to be found in works of fiction, essays, and belles-lettres, must necessarily be very inferior substitutes for the solid information collected together in text-books on the subject. The fact remains, however, that whereas fiction, essays, and belles-lettres are extensively perused by the man in the street, text-books on architecture are not.

Samuel Pepys—who may safely be described as the typical man in the street of his day—certainly did purchase one of the latter, "at the coffee-house in Exchange Alley," and he notes in his Diary (Diary of Samuel Pepys, 1663, May 28. The book referred to by Pepys is "Counsell to Builders," by Sir Balthazar Gerbier) that "it is dedicated almost to all the men of any great condition in England, so that the dedications are more than the book itself, and both it and them not worth a farthing. . ."

As a general rule, the ordinary person is not in the least interested in text-books of any description, other than those appertaining to his own particular profession, craft, trade, or calling; and a state of society in which railway station bookstalls are stocked with text-books, instead of popular fiction, would, at the present time, appear to be even more fantastic a vision than the intellectual Utopia depicted in William Morris's "News from Nowhere."

The influence of general literature, and especially the influence of the novel, in directing public opinion on matters relating to architects and their art is, therefore, of considerable importance, and the composition of the public library—an institution which caters primarily for the intellectual recreation of the man in the street—is worthy of consideration here, as an accurate reflection of this inclination.

The Metropolitan Borough of Camberwell, for instance, has a population of 267,235. The Lending Departments of its six Public Libraries contain a total of 56,500 books, of which 12,000 are devoted to fiction and 210 to architecture. The Reference Departments of the Public Libraries in the same Borough contain 15,000 volumes, of which 100 are devoted to architecture.

Again, the City of Leicester has a population of 234,190. Its Public Lending Library contains 25,241 books, of which 12,178 are devoted to fiction,and 59 to architecture, whilst the Public Reference Library contains 23,871 volumes, of which 167 are devoted to architecture.

The County Borough of Swansea has a population of 157,561, and possesses a Public Lending Library containing 20,000 volumes, of which 51 are devoted to architecture; a Reference department of over 30,000 volumes with 100 on architecture; and a Juvenile Lending department of 4,500 books, of which 50 are allotted to architecture and the allied arts. The works of fiction in the Swansea Library constitute, approximately, 15 per cent. of the whole collection.

The figures quoted for the population of these towns are taken from the official census (1921) report, and the statistics concerning the composition of the Public Libraries have been obtained by the courtesy of their respective Librarians.

Even as the man in the street obtains his mental picture of Roman architecture, not from Gwilt's translation of Vitruvius or from fragments of marble preserved in the British Museum, but from descriptive historical fiction such as Lytton's "Last Days of Pompeii" or "Pearl Maiden" by Rider Haggard, so, in this connection, the casual and indirect references to the subject, in the works of popular novelists, undoubtedly have a far greater significance than all the pronouncements on architecture and its practitioners that were ever written by such an essayist as Ruskin.

For example, Charles Dickens, who, according to H. G. Wells, spoke for the average Englishman as no later writer can be said to have done ("Mankind in the Making," by H. G. Wells, Chapter VII), created numerous fictitious characters in his works, which have come to be regarded as actual types. Thus, in the imagination of the man in the street, Bill Sikes will always remain the typical burglar, Mrs. Gamp the typical midwife, and Tite Barnacle the typical bureaucrat. Dickens, it will be remembered, also created Pecksniff, the architect and arch-humbug, and, since the first publication of "Martin Chuzzlewit," the effect of the enormous and continued popularity of the Victorian Master's works has been to prejudice the ordinary architectural practitioner in the eyes of the man in the street. The latter, whose intercourse with architects in general is usually confined to an imaginary acquaintance with that nebulous immortal who once designed a house and forgot the staircase, obviously, cannot be blamed for regarding Pecksniff as a type rather than a caricature, when the creator of that character himself states, in the "Author's Preface" to "Martin Chuzzlewit" :—

" . . . I have never touched a character precisely from the life, but some counterpart of that character has incredulously asked me : 'Now really, did I ever really see one like it ?'

"All the Pecksniff family upon earth are quite agreed, I believe, that Mr. Pecksniff is an exaggeration, and that no such character ever existed. I will not offer any plea on his behalf to so powerful and genteel a body . . ."

This fashion in disparagement, so ably set by Dickens in "Martin Chuzzlewit," appears, unfortunately, to have been followed by numerous other novelists of repute, and the earnest student of fiction will find that the introduction of the architect as a character is usually utilized to the full as an admirable opportunity for a display of the particular type of satire affected by the author. Furthermore, when the construction of the plot does not necessitate the introduction of a professional practitioner, as a definite character, it is quite customary for an author to indulge in a few general witticisms at the expense of the architect in the abstract—a procedure very much akin to that of the music hall comedian who, as a last resource, can always raise at least one laugh by references to the town of Wigan.

Mr. George Bernard Shaw, for instance, opens Act IV of "John Bull's Other Island" with this prefatory note: "The parlour in Cornelius Doyle's house. It communicates with the garden by a half-glazed door. The fireplace is at the other side of the room, opposite the door and windows, the architect not having been sensitive to draughts. . . ."

George Eliot, in "Adam Bede" (Chapter XVI), breaks into a rhapsody of praise of the personal attributes of Adam, the super-carpenter, and contrives to introduce therein the inevitable side-thrust at the architect. For Adam, the super-carpenter, "had no theories about setting the world to rights, but he saw there was a good deal of damage done by building with ill-seasoned timber—by ignorant men in fine clothes making plans for outhouses and workshops and the like without knowing the bearings of things——. . ."

Mr. Arnold Bennett, in introducing the Five Towns architect to the reader of "Clayhanger" (Chapter III), seizes the opportunity of indulging in a few trite comments on the profession as a whole. "Osmond Orgreave," writes Mr. Bennett, "had a good deal of land under his control. He did not own it, he hawked it. Like all provincial, and most London architects, he was a land-broker in addition to being an architect. Before obtaining a commission to build a house, he frequently had to create the commission himself by selling a convenient plot, and then persuading the purchaser that if he wished to retain the respect of the community he must put on the plot a house worthy of the plot. . . ."

Again, in "These Twain" (Chapter X, paragraph 2), Mr. Bennett gives, in a few terse sentences, a kind of obituary notice of this same architect of the Five Towns. " . . . The fact was that Osmond Orgreave had never related himself to the crowd. . . . Further, he had a name for being 'pretty sharp' in business. Clients had had prolonged difficulties with him—Edwin himself among them. . . . . "

In "Kipps" Mr. H. G. Wells portrays a kind of low-comedian architect: "A small, alert individual with a cylindrical silk hat and a black bag containing a spring tape measure, some hard biscuits, a metal flask, a new pair of dogskin gloves, a clockwork motor-car partially wrapped in paper, a bunch of violets, a paper of small brass screws, and a large distended note-book." This extraordinary person, having been called in by Kipps to discuss the design for a proposed residence, had, it appears, "spent the previous afternoon in finding three large houses in 'The Builder,' which he intended to combine into an original and copyright design of his own. . . ."

The novel requirements of the Kippses, however, cause him to abandon the idea, and the underlying sarcasm of Mr. Wells, that permeates the architect's subsequent discourse to them on style, is so damaging that no apology is made for quoting it at some length:—

" . . . He explained that he had been thinking of a Queen Anne style of architecture (Ann, directly she heard her name, shook her head at Kipps in an aside) so far as the exterior went. For his own part, he said, he liked to have the exterior of a house in a style, not priggishly in a style, but mixed, with one style uppermost, and the gables and dormers and casements of the Queen Anne style, with a little rough cast and sham timbering here and there, and, perhaps, a bit of an overhang, diversified a house and made it interesting. The advantage of what he called a Queen Anne style was that it had such a variety of features. . . . Still, if they were prepared to be unconventional, it could be done. A number of houses were now built in the unconventional style, and were often very pretty. In the unconventional style, one frequently had what perhaps he might call Internal Features; for example, an old English oak staircase and gallery. White rough cast and green paint were a good deal favoured in houses of this type.

"He indicated that this excursus on style was finished by a momentary use of his cough, and reopened his note book, which he had closed, to wave about in a moment of descriptive enthusiasm while expatiating on the unbridled wealth of External Features associated with Queen Anne. . . ."

In due course, three sets of sketch plans arrive for the consideration of the Kippses.

". . . The first set were very simple, with practically no External Features—'a plain style,' he said it was—but it looked a big sort of house nevertheless; the second had such extras as a conservatory, bow windows of various sorts, one rough-cast gable and one half-timbered ditto in plaster, and a sort of overhung veranda, and was much more imposing; and the third was quite fungoid with External Features, and honeycombed with Internal ones. it was, he said, 'practically a mansion,' and altogether a very noble fruit of the creative mind of man. It was, he admitted, perhaps almost too good for Hythe; his art had run away with him and produced a modern mansion in the 'best Folkestone style.' It had a central hall with a staircase, a Moorish gallery, and a Tudor stained-glass window, crenellated battlements to the leading over the portico, an octagonal bulge with octagonal bay windows surmounted by an Oriental dome of metal, lines of yellow bricks to break up the red, and many other richnesses and attractions. It was the sort of house, ornate and in its dignified way voluptuous, that a city magnate might build, but it seemed excessive to the Kippses. The first plan had seven bedrooms, the second eight, the third eleven: they had, the architect explained, 'worked in' as if they were pebbles in a mountaineer's boot . ." ("Kipps," by H. G. Wells, Book 3, Chapter I, paragraphs 4–5.)

As a perpetuation of that remarkable tradition of satirical disparagement of the general architectural practitioner, which appears to have been initiated by Charles Dickens in "Martin Chuzzlewit," the foregoing extracts from "Kipps" are probably unequalled in the realms of modern fiction.

Indications are to be found in other novels by Mr. Wells of a conscientious desire to maintain this unwritten law of romance, as, for example, the conversation between the two principal characters in "Joan and Peter" (pp. 731-2).

"Joan: Peter. I shall learn plumbing.

Peter: Jobbing?

Joan: No. And bricklaying and carpentry. All I can. And then I am going to start building houses.

Peter: Architect?

Joan: As little as possible. No. No beastly Architecture for Art's sake for me! Do you remember how people used to knock their heads about at 'The Ingle Nook'?"

It may be interesting to consider next the architect in fiction, according to Mr. John Galsworthy: "Philip Bosinney," the Galsworthy type, ". . . was of medium height and strong build, with a pale, brown face, a dust-coloured moustache, very prominent cheekbones, and hollow cheeks. His forehead sloped back towards the crown of his head and bulged out in bumps over the eyes like foreheads seen in the lion-house at the Zoo. He had sherry-coloured eyes, disconcertingly inattentive at times . . ." ("The Man of Property," by John Galsworthy, Part I, Chapter I), and no assiduous student of fiction will, therefore, be surprised to read later that having through the influence of his fiancée been entrusted with a commission to design a country house for that lady's cousin, Bosinney promptly jilts her, and after seducing the wife of his client, is killed in a cab accident.

In "The Man of Property" there are also several illuminating views on architects by various members of the Forsyte family, that typical English middle-class household whose fortunes have been developed by Mr. Galsworthy through a saga of five novels.

There is the soliloquy of Soames Forsyte, "The Man of Property," as he first contemplates the idea of a country house (Part I, Chapter IV): ". . . The house must be in good style, something that would always be certain to command a good price, something unique, like that last house of Parkes, which had a tower; but Parkes had himself said that his architect was ruinous. You never knew where you were with those fellows; if they had a name

they ran you into no end of expense and were conceited into the bargain. And a common architect was no good —the memory of Parkes' tower precluded the employment of a common architect . . ."

There is the remark of young Jolyon Forsyte, the artist, that "the great majority of architects, painters, or writers have no principles, like any other Forsytes. Art, literature, religion, survive by virtue of the few cranks who really believe in such things, and the many Forsytes who make a commercial use of them . . ." ("The Man of Property," Part II, Chapter X.)

And there is the lament of James Forsyte, the solicitor, who attributes the misfortune that has befallen the family to the introduction into it of "a person like this Bosinney —an architect" ("The Man of Property," Part III, Chapter II.)

As a novelist with a reputation for humour, to be maintained at all costs, it is natural that Mr. Pett Ridge, in dealing with architects, should give his readers something of an exceptionally facetious character. Mr. Bellingham in "Well-to-do Arthur" was "a voluble person who seemed to reckon any moment wasted that was not occupied by his own voice . . ." He had an office in Albemarle Street, and was "not only an architect but a gentleman!" ("Well-to-do Arthur," Chapter XI.)

The architect in fiction, according to Mr. Pett Ridge, may perhaps be epitomized in the following extract ("Well-to-do Arthur," Chapter XI): ". . . 'An architect,' explained Arthur, to Jane's relative, 'is one who designs buildings.'

"'I've known hundreds,' said the lady. 'At least I say hundreds, but I mean two. One was a land agent, and an insurance person, as well. And very good at collecting foreign postage stamps. The other one drank' . . ."

The inevitable touch of subtle cynicism appears in Miss Florence Converse's "Children of Light," where the reader will find that Brother Richards, the architect, "had visions of a city which should set the standard for municipal architecture for all time. When he talked about it I used to be reminded of the city in the Apocalypse, except that his specifications and measurements were less definite than those of St. John . . ." ("The Children of Light," Book I, Chapter I, Part III.)

In dealing with this subject it will be agreed that careful consideration must be apportioned to any work of fiction, in which the general reader is given enlightenment on the principles of architectural design. The novel-reader with architectural aspirations will gather from a somewhat indefinite context that the hero of "Low Ceilings" had but recently negotiated his first qualifying examination (presumably the Preliminary test of the R.I.B.A.), and was still a pupil when: ". . . There had been an open competition for a Board of Guardians' building in a Southern town. It was a small town, ripe and sleepy, and I knew it well. As I read the conditions of the competition the town itself rose up before me in all its red-bricked mellowness, and at once I had a picture of an apposite building standing definite and four-square in my brain. It was an inspiration. The whole thing came with the unequivocal sureness of an inspiration, and I saw the structure, an English Renaissance building, with deep characteristic bays, mullioned windows, and pierced parapets, fitting into, melting into the very atmosphere of the town. I worked out my preliminary sketch with the completeness and certainty that is part of such blazes of vision. My chief, Hall Milne, had been roughing out an idea of his own, but when I showed him my suggestion, he threw his drawing aside, and gave his undivided energy to helping me . . ." (Low Ceilings," by W. Douglas Newton, Chapter III, Paragraph 2.)

By a recapitulation of the names of the authors from whose works the extracts that form the basis of this inquiry have been taken, a formidable list can be prepared. Dickens, George Eliot, Wells, Galsworthy, and Arnold Bennett are novelists whose popularity is world-wide, and whose pre-eminence in their art is unchallenged. In the absence of any strong authoritative statement of equal prominence to the contrary, therefore, is the man in the street not justified in forming a general opinion of the average professional practitioner of the greatest of all the arts, as an inefficient, incompetent type of individual, when he is invariably referred to in terms of contempt or ridicule by novelists of such repute?

It is an unfortunate fact that the obsession of the immortal Don Quixote that Dulcinea del Toboso was no humble peasant girl, but a beauteous maiden of high degree, was not more persistent than this perpetuated fallacy of the novelist, for, in the wide realms of romance, the works in which the architect is accorded a treatment in the slightest degree sympathetic, may be counted on the fingers of one hand.

Nevertheless, as a slight, but delightful contrast to the burlesques of Mr. Pett Ridge, it may, perhaps, be permissible to mention that very human sketch called "Witches' Loaves," by O. Henry ("Sixes and Sevens," Chapter III), if only as a proof that it is possible for a novelist to weave a phantasy round even the most slender item of professional interest without the aid of invective. But then O. Henry had once been an architect's draughtsman himself!

In the wilderness of fictional misrepresentation it is refreshing and invigorating to the seeker after truth to come upon an oasis. In the novels of Mr. J. D. Beresford, at any rate, are to be found depicted architects who are also human beings. Here, almost alone in the pages of fiction (with the possible exception of the professional practitioners in Mr. Thomas Hardy's "Laodicean"), are portrayed architects who are not humbugs like Pecksniff, or amiable hawkers of land and business "sharps" like Osmond Orgreave. They do not follow the great Dickensian tradition perpetuated in the eccentric ignoramuses of Mr. Wells, or the bold, bad villains of Mr. Galsworthy. They are not insurance agents, and the collection of foreign postage stamps is not among their qualifications.

The works of Mr. Beresford open up a new vista of hope, and indicate clearly that a correct presentation of the mission of the architect, through the medium of fiction, is not impossible of attainment. For instance, the advocacy of professional Registration in a popular novel would almost appear to be a fantastic figment of the imagination. Yet in Mr. Beresford's "House-Mates" the following paragraph, perused by a public that is never reached by the professional press, has a value, as propaganda, that cannot be overestimated:—

" . . . I passed my final at the Royal Institute when I was twenty-five, and thereafter had the right to use the letters A.R.I.B.A. after my name, and an authority for protesting against the State neglect of architecture as a profession. If no architect were allowed to practise until he had passed a qualifying examination, and was thereafter liable to lose his diploma for any flagrant breach of the London or provincial building regulations, the various Acts that have been passed might really protect the public from the enormities of the jerry-builder. . . ." ("House-Mates," Chapter II, paragraph 3.)

Even as the overpowering effeminacy of Samuel Richardson's "Pamela" will induce the reader of novels to turn with relief to the more virile interpretation in Fielding's "Joseph Andrews," so, in that Utopian age when assistant librarians are really authorities on the books they recommend, the subscriber will be handed, unhesitatingly, Mr. Beresford's "Early History of Jacob Stahl" as an antidote to any romance of the "Low Ceilings" school.

In concluding this inquiry into the effect of the novel on the intellectual inclination of the man in the street, it may not prove superfluous to insert here statistics concerning the books to which reference has been made during the preceding pages. The general popularity of any romance is reflected not by the mere fact that it is included in the catalogue of any public library, but by the number of times it is borrowed from that institution during any given period and the average number of borrowers of the following novels from each of the six public lending libraries in the Metro-

politan Borough of Camberwell during the past six months is as follows. The figures have been obtained by the courtesy of the chief librarian of the Camberwell Public Libraries :—

"Well-to-do Arthur"	(Pett Ridge) ..	21
"Martin Chuzzlewit"	(Dickens)	18
"Clayhanger"	(Arnold Bennett) ..	16
"Kipps"	(Wells)	15
"The Man of Property"	(Galsworthy) ..	14
"House-Mates"	(J. D. Beresford) ..	14
"Adam Bede"	(George Eliot) ..	10

"Literature," says Mr. G. K. Chesterton, "is a luxury; fiction is a necessity" ("The Defendant." A Defence of Penny Dreadfuls), and at the present time, when the popularity of the novel is paramount, the effect of the writings of the essayists on such a subject as this may perhaps appear to be relatively unimportant.

It is worthy of note, however, that the works of Ruskin are now studied by large numbers of working men and women interested in his political and ethical pronouncements, and the peculiar views of Ruskin on architecture and his contempt for architects in general must, to a large extent, therefore, be assimilated with the other opinions propounded in his writings.

In circles of advanced political thought, the declarations of Jean Jacques Rousseau are read with an enthusiasm bordering on veneration, and the "Discourse on the Arts and Sciences"—although probably not intended by its author as a serious controversial contribution—has its effect in prejudicing the views of his followers on the significance of architecture and the allied arts in the social structure of the State.

The vogue of the "Back to the Land" movement has received added stimulus as a natural sequence of the great war, and what may be termed "the literature of the open air" enjoys a corresponding popularity. In this connection the fierce criticisms of contemporary architecture and architects contained in the essays of Thoreau ("Walden," by H. D. Thoreau. "Economy.") cannot be disregarded, but their influence is probably more than neutralized by the delicate sympathy with which buildings of architectural and historical interest are portrayed in the "Wanderer" books of Mr. E. V. Lucas, or the "open road" works of Mr. Hilaire Belloc.

No survey of popular modern literature would be complete without some reference to that type of book which is in the nature of an autobiography, but which relies, nevertheless, for its humour mainly upon anecdotes, for the authenticity of which the author takes no responsibility. It is only to be expected that in works of this character the exploitation of the architect as an appropriate subject for ridicule should be strictly in accordance with the great Dickensian tradition.

The following extract from "Mayfair and Montmartre," by Ralph Nevill, may be taken as a typical example: ". . . The modern Admiralty, according to a story for which the writer will not vouch, has an amusing origin. The architect who had been commissioned to prepare the designs for the new building was at the same time engaged planning a new lunatic asylum.

"Summoned suddenly to Windsor to show Queen Victoria his drawings, he took with him by mistake those for the asylum. This he only discovered when Her Majesty, to whom he handed his portfolio, expressed herself highly pleased.

"As she approved very much of the design, nothing more was to be done, and the Admiralty as it stands to-day was constructed on the plans made for the asylum . . ."

To neutralize the effect of any criticism propounded by a popular author through the medium of a work of fiction is a task of supreme difficulty. It is obviously impossible to publish novels in reply, as Fielding did to Richardson; but, in the interests of the general public, it is quite probable that the press would welcome any critical reviews by architects of such works as purport to deal, however indirectly and causally, with the art of architecture and its practitioners.

The popularity of a large number of modern novelists is to a great extent maintained by the facility with which they satirize—and in default of evidence of equal prominence to the contrary, they are assumed by the readers of their works to be possessed of sufficient authentic knowledge to entitle them to satirize—all other sections of the community. They may be intimately conversant with the necessary social and technical knowledge which justifies their recognition as experts in the criticism of many of the aspects of life, but in that particular branch which comprises the art of architecture and its practitioners, the experience of many of them appears to have been remarkably small, and, in consequence, their claim to be regarded as authorities is as illogical as would be the attitude of a tailor who, in order to attract attention to his skill, might exhibit a notice over his shop front, such as—"So-and-So, the only tailor in this street who has ever served his apprenticeship to an architect."

In the columns of the Press the criticism of a technical work on architecture by an architect is no novelty, but the review by an architect of a popular novel purporting to deal with the same subject is probably without precedent, and in the interests of the man in the street it is considerably overdue.

Art and Lettering

IT is odd to read that "after standing without an inscription since its erection eighty years ago, the statue of King William IV at London Bridge is to be inscribed with the King's name and the dates of his birth and death." This delayed delivery of letters transcends the worst recorded effort of the G.P.O. In recompense, the lettering will probably be much better done than it would have been eighty years ago, when this gentle art had sunk below zero. Within the past twenty years or so, thanks to the active interest in it assumed by William Morris, Mr. Emery Walker, Mr. E. F. Strange, Mr. L. F. Day, Mr. Edward Johnston, and others (not forgetting the encouragement given by Mr. Herbert Batsford, the title-pages of whose books are always works of art), there has been a renaissance of good lettering, the ugly "modern face," still too familiar in newspaper printing, having been largely abandoned for the graceful old Roman that is the redeeming feature of many a seventeenth- and eighteenth-century monument in, for instance, Westminster Abbey. Lettering has singular potency to make or to mar not only the object to which it is applied, but everything within sight of it. May the belated inscription on the William IV monument maintain the better tradition! Concerning inscriptions to statues, the authorities should take note of a strange misdescription of Abraham Lincoln, with reference to whose statue at Westminster Mr. Samuel E. Hilles, of Cincinnati, Ohio, writes to "The Times" to express his surprise at noting "on the placard of the Lincoln statue the statement that Lincoln was 'the Father of his Country.' That phrase," Mr. Hilles adds, "more properly applies to George Washington." Lincoln, of course, was not born until long after the birth of the American Nation, which will kindly excuse our insular ignorance in confusing the Father of his Country with its most illustrious son, whom we all venerate though we mis-describe him. But the mistake is not past remedy. It is not engraven on stone, but only printed on cardboard, and its authors would appear to be Americans.

An Exhibition of Photographs by F. R. Yerbury

THE great value of a photograph is its truth. In looking at an architect's perspective you are able to realize his conception, but you have no means of ascertaining whether he has achieved his effect in bricks and mortar. The drawing can tell a lie, but the photographs can present facts alone. It is this literal quality of presentation that constitutes its virtue.

So much is obvious. Until more or less recently, however, people did not generally realize one rather important factor in the game; that though the eye of the camera may be literal enough, the human eye most certainly is not literal, nor anything approaching that, but translates all that it sees into a sort of convention. So that the picture upon the plate of the mind, and the picture upon the plate of the camera show invariably a discrepancy which varies with the individual. In their period of decadence the Impressionists used to put forward as one of their arguments that they painted things as you saw them, not as you thought you saw them, and there was a certain amount of truth in this. You certainly do not see objects in all the detail of an Italian or a Dutch painting; and though to say that an object has been represented as it is seen is no argument in favour of a work of art, it makes the one legitimate argument in favour of a photograph, which stands or falls according to its compliance with this demand.

The chief fault of an ordinary "unfaked" photograph lies in the plethora of detail which it displays. The human eye never sees an object as a whole, but selects certain prominent features which are telegraphed to the brain, the imagination automatically supplying from its store of experience such details as will make the conception complete. To have the details of an object obtruding upon the eye with the emphasis of its principals is obviously, therefore, unnatural, and the photographer who is an artist has thus to

OLD HOUSE, RYE.

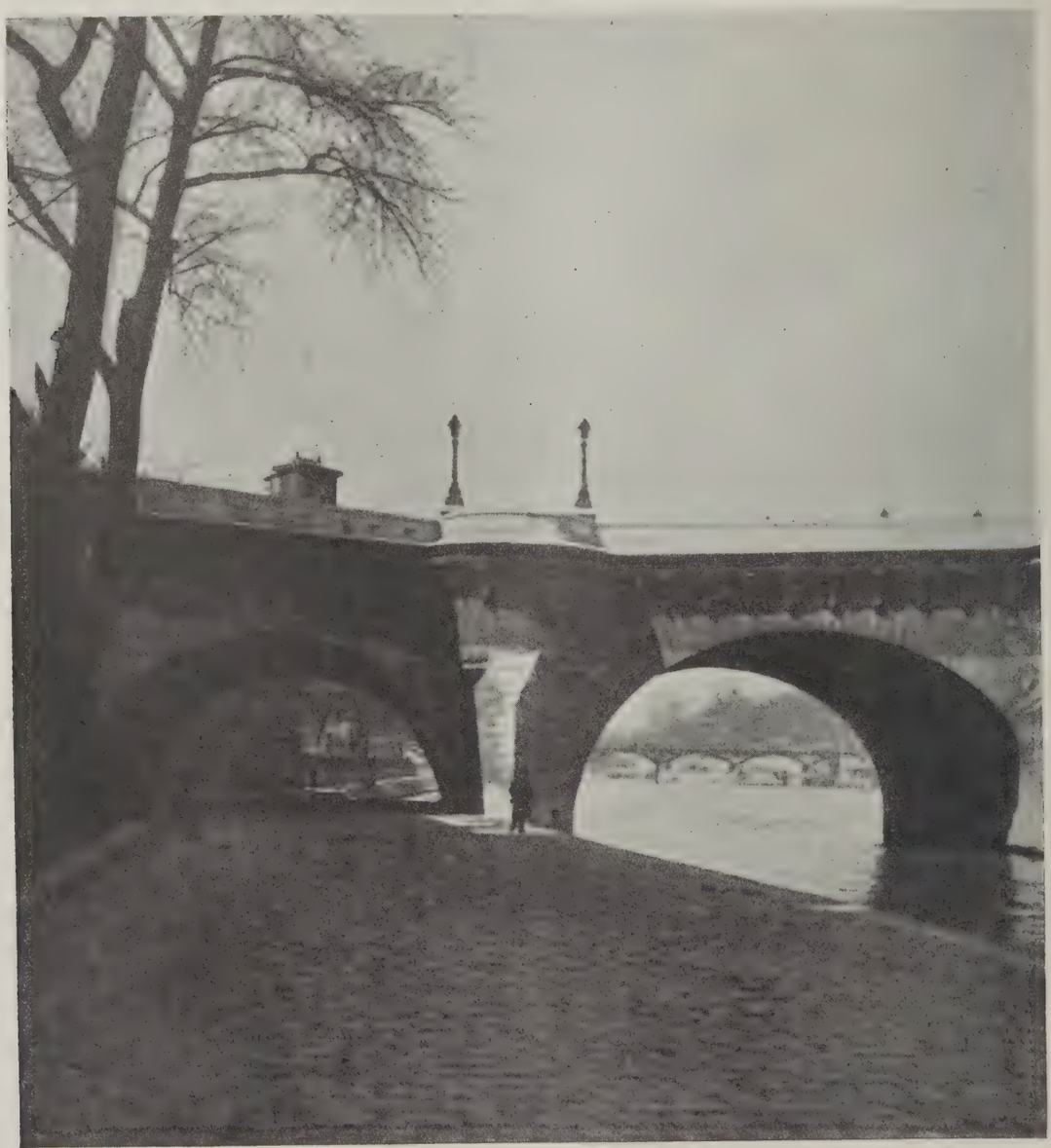
FROM THE EXHIBITION OF PHOTOGRAPHS BY F. R. YERBURY AT THE ARCHITECTURAL ASSOCIATION.

subordinate by artificial means the unessentials of his picture. Again, from the objects under its gaze, the eye selects for its own comfort a rough sort of composition, and the photographer in his turn must capture a composition which is natural to the eye.

The result of such careful studying of the natural, as opposed to the literal, can be seen in the illustrations of F. R. Yerbury's camera work, which are illustrated here. At the Architectural Association an exhibition of his work is now on show, and will be open until the end of the month; and, beyond its intrinsic interest as an exhibition of very high merit by an expert and an artist in the handling of the camera, it is of really practical interest to architects as showing how important it is for their own sakes that they should get sympathetic photographic interpretations of their buildings. This exhibition is purely pictorial, but the same kind of work can be, and is, introduced into particular architectural treatments with the utmost effectiveness. We all remember the sensation the Exhibition of American Architecture at the R.I.B.A. made at the end of last year; but the sensation was caused as much by the photographs as by the architecture. Every building was photographed in such a way that the very most could be made out of its qualities and surroundings. The American architects realized the immense disadvantage of showing their works to thousands of people stripped, not only of the atmosphere to which they belonged, but of their colours and legitimate degrees of light and shade, and the carefully established values and combinations of form upon which the success of a piece of architecture depends. By experimenting with their illustrations, therefore, they obtained effects which, if not entirely natural, approximate to reality.

Few English architects, on the other hand, tamper with their photographs. They are content with the most hideous photographical travesties of their buildings, going possibly on the assumption that a bad photograph cannot make bad architecture. That is true. But a bad photograph can make good architecture appear bad, which does not alter the architecture certainly, but is vastly important when the influence of a photograph is considered.

Fine architectural illustrations will do more than many articles to stimulate interest in architecture. An exhibition such as Mr. Yerbury's will do much to convince architects of the importance of good photography. And fine illustrations of their work circulated in the press and displayed in exhibitions will do something to convince the public of the importance of good architecture. H. DE C.



PONT NEUF, PARIS.
FROM THE EXHIBITION OF PHOTOGRAPHS BY F. R. YERBURY AT THE ARCHITECTURAL ASSOCIATION.

Monumental Architecture. 6.—Syon House: The Hall

Robert Adam, Architect

Syon House was erected from the designs of Robert Adam in 1762, and is an excellent example of his monumental manner. Our reproduction is from the exhibition of photographs by Mr. F. R. Yerbury, which is now being held at the Architectural Association, Bedford Square.

Bracken Hill, Northwood

C. H. Biddulph Pinchard, F.R.I.B.A., Architect

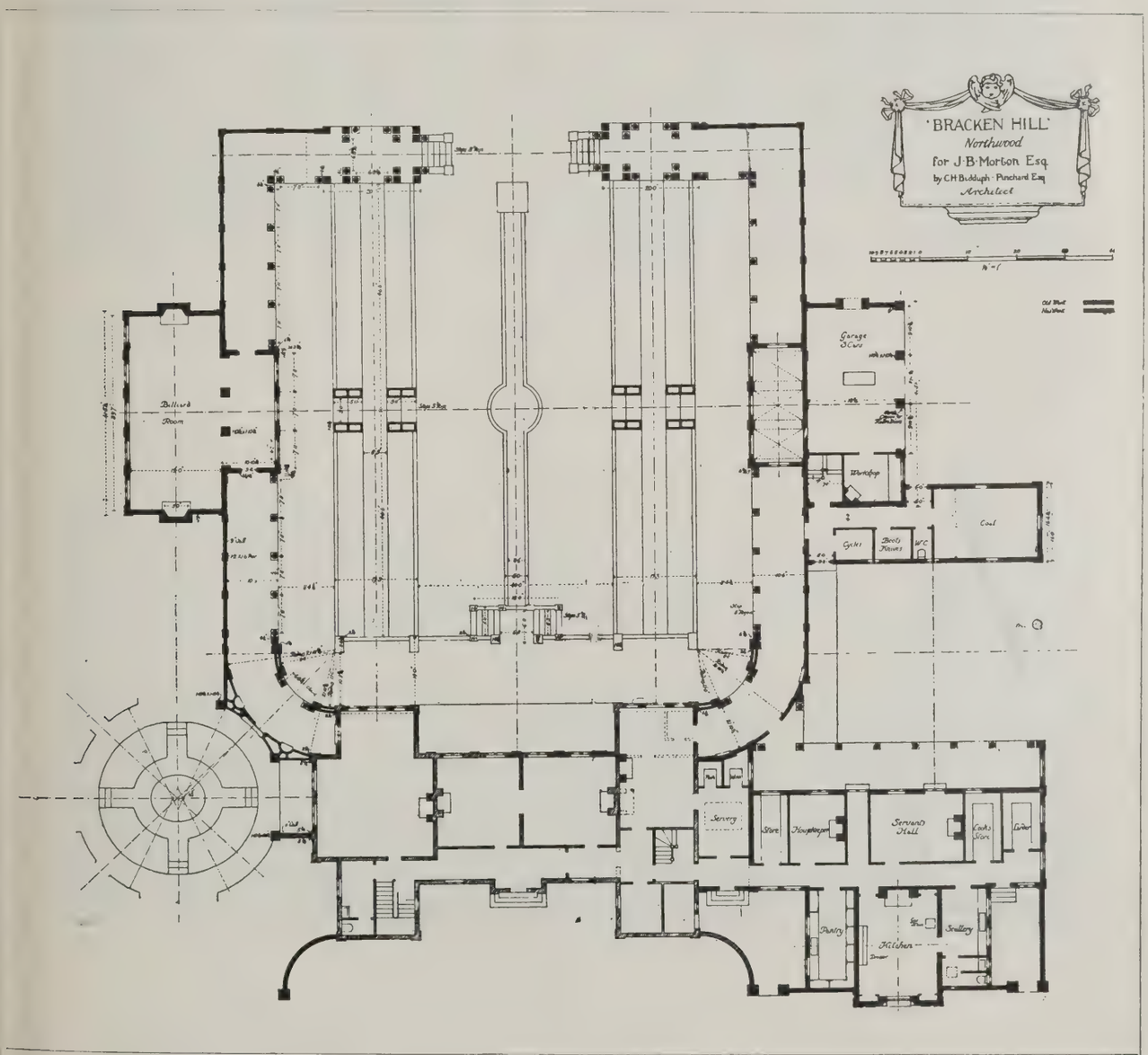
THIS house was commenced towards the latter part of 1913, and completed, so far as the original design was concerned, in the autumn of 1914. During the war the owner for whom it was erected sold it, and in 1919 Mr. C. H. Biddulph Pinchard, F.R.I.B.A., architect, was instructed by the new owner to enlarge the servants' quarters and to build a new garage and billiard-room.

The main house had been conceived as a complete building. The proposed new work presented some difficulty from the point of view of successfully grouping the various requirements of the owner so as to form a good and convenient plan without spoiling the amenities of the house and its proportions in elevation. After making two or three separate designs one was decided upon in which the various buildings would be grouped to give them separate entities, the buildings being connected to the main house by covered ways or wide loggias.

The plans shown in the accompanying illustrations were adopted, and the work commenced; but owing to the somewhat ambitious nature of the project, and the ruinous building costs in force at the time, the complete scheme has never been carried into effect. The billiard-room, which was designed to balance the garage and garden-house block, has not as yet been carried out, and the plan in its entirety, so far as the south side of the central garden is concerned, is incomplete.

The whole garden is some six acres in extent, and was designed by the architect, and carried out by Messrs. Cheal, of Crawley. The photographs were taken just after the building was finished, and give only an approximate idea of the beauty of the design now that the outlines are clothed with plants and creepers. The house generally is designed internally in the rather late Queen Anne manner, and most of the rooms are panelled, the painted and enriched fireplaces having open hearths and Dutch tiled interiors.

The general contractors were Messrs. Wiggs and Sons, Watford, the sub-contractors being as follows: Messrs. Coalbrookdale Co. (heating); Messrs. Tyler and Freeman (electrical work); and Messrs. G. and H. Brown (plasterwork in dining-room and garden).



BRACKEN HILL, NORTHWOOD: GENERAL PLAN. C. H. BIDDULPH PINCHARD, F.R.I.B.A., ARCHITECT.

ENTRANCE FRONT

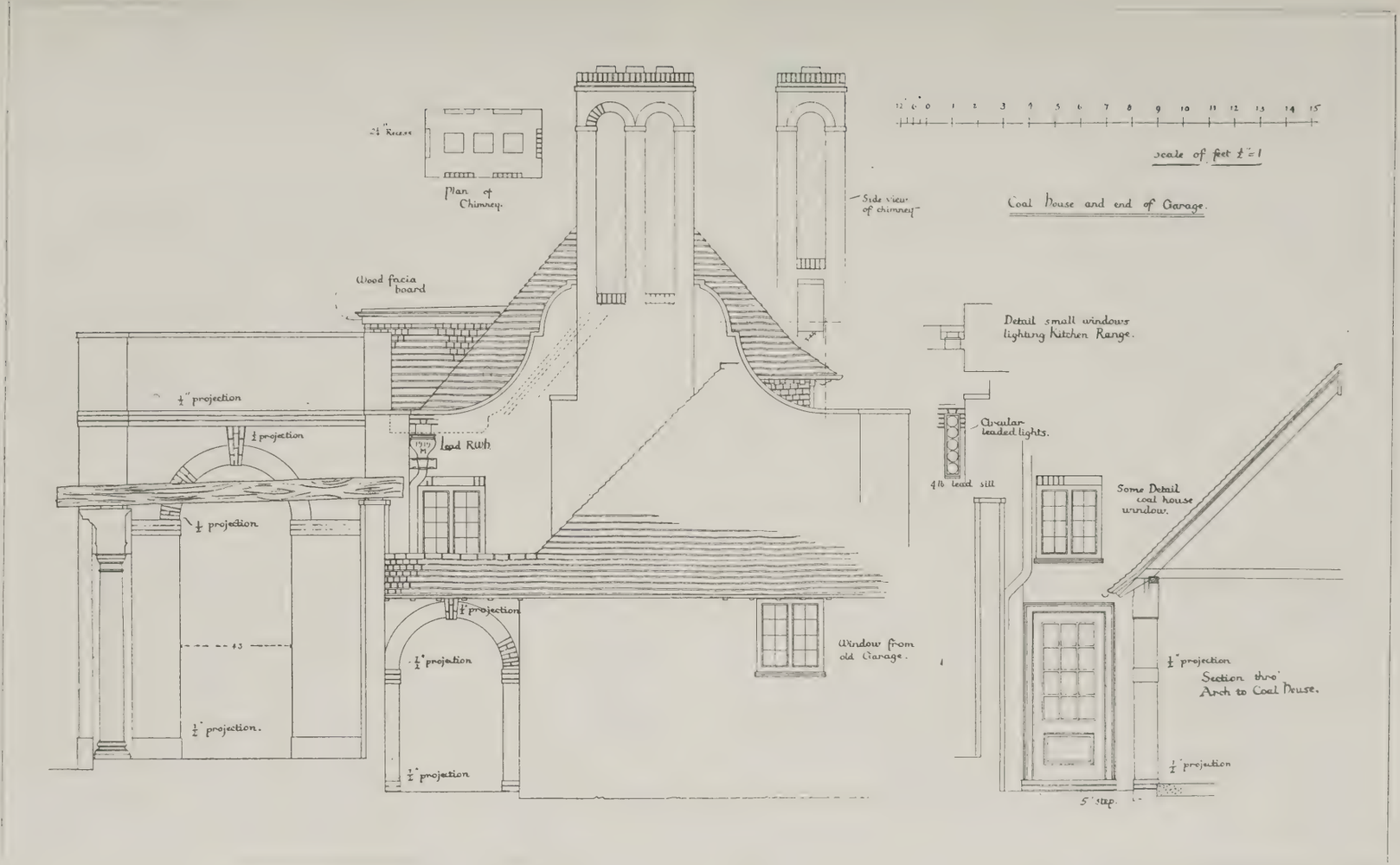
GARDEN FRONT.

BRACKEN HILL, NORTHWOOD. C. H. BIDDULPH PINCHARD, F.R.I.B.A., ARCHITECT.

Modern Domestic Architecture. 37.—Bracken Hill, Northwood: Detail of Garden Front

C. H. Biddulph Pinchard, F.R.I.B.A., Architect

Some extremely interesting additions to this house, including new servants' quarters and a garage, have lately been completed from the designs of Mr. Biddulph Pinchard. The various new elements, while conceived as separate entities, have been grouped together in a charming design, the connecting links taking the form of covered ways or wide loggias.



BRACKEN HILL, NORTHWOOD: DETAIL OF END OF GARDEN HOUSE AND GARAGE.
C. H. BIDDULPH PINCHARD, F.R.I.B.A., ARCHITECT.

THE GARDEN HOUSE.

THE GARDEN, FROM THE TERRACE.

A CORNER PAVILION.

THE KITCHEN, FROM THE DRIVE.

BRACKEN HILL, NORTHWOOD: VIEW IN GARDEN HOUSE.
C. H. BIDDULPH PINCHARD, F.R.I.B.A., ARCHITECT.

Mr. Gotch on the Smithson Drawings

The chief collections of architectural drawings preserved from the past are those of John Thorpe, the Smithsons, Inigo Jones, Webb, Wren, and Gibbs, a series which covers almost completely the evolution of the classic manner in England. Until to-day there has been on exhibition at the R.I.B.A. the two least known of these collections of drawings—those of the Smithsons and of John Webb—both of which are owned by private people, so that the chance of seeing them has been rather unique. Our gratitude in this respect is due to Mrs. S. Coke, who owns the Smithson drawings, and to Sir Vere Isham, who owns the Webb drawings, for putting them at the disposal of the R.I.B.A.

Last Thursday Mr. J. A. Gotch, F.R.I.B.A., gave a delightful address on the exhibition, in which he is, of course, highly interested, being, as Mr. Waterhouse expressed it, a detective amongst ancient things, and never so happy as when surrounded by mysteries of an obscurity which appears impenetrable. The Smithson collection, he said, is connected with the first third of the seventeenth century, and it overlaps in an interesting way those of John Thorpe and Inigo Jones. Thorpe covers the period from 1570 to 1621, the Smithsons the period from 1599 to 1632, and Jones and Webb the period from 1619 to the sixteen-sixties.

The Smithsons were a family of architects, Huntingdon Smithson being perhaps the best known. To him Walpole ascribes the designing of Bolsover Castle, near Nottingham, in which district the family resided and practised: but probably the design owes more to his father John, who died in 1634. There are several drawings of this building, and many drawings of other buildings in the same district, including the Riding House at Welbeck, Worksop Manor, Clifton, Houghton, Wyverton, the Neville's house at Groves, a house at "Blackwell in the Peak," and "My Lord Sheffield's" house in Lincoln. But the activities of the Smithsons were by no means restricted to their own neighbourhood, for there are many drawings relating to Arundel House in London, Somerset House, my Lord Northampton's house, Lord Bedford's house at Twickenham, Sir Thomas Vavasour's at Petersham, Nonsuch in Surrey, and, in particular, Wimbledon House, built by one of the Cecils in 1588.

But in addition to these and many others there are two drawings made in London relating to the Banqueting House, which are of prime importance from the historical point of view. We were taught in our youth that the Banqueting House was the only portion ever built of a vast palace designed by Jones for James I. I have shown elsewhere that this idea is erroneous, and that, in fact, the palace was designed by Webb for Charles I, and it incorporated Jones's Banqueting House which was already built. These two drawings of Smithson's have an interesting bearing on the Banqueting House itself, and their connection with it can be made clear in a few words. There was a Banqueting House here in Elizabeth's time, which had been rebuilt by James I in 1607. This building was burnt down in January 1619, and within three months Jones had designed the present building to replace it on the same site, the work being commenced in the summer. The two Smithson drawings are (1) a plan of the old destroyed building, and (2) an elevation of the ground story of the new building, which, when he drew it, had got so far in process of erection. The whole collection is of first rate importance, and brings vividly to our minds the actual methods of architectural design which prevailed during the century and a half extending from Elizabeth to George II.

In proposing the vote of thanks Sir Bannister Fletcher criticized Mr. Gotch's theory that Webb and not Jones designed the great Palace scheme at Whitehall. Is it possible, he said, that Webb, a man without extensive knowledge either of the Italians or of Palladio, could have produced upon his own a scheme so typically Italian? Is it not more probable that Webb was employed by Jones to draw out this scheme from Jones's design, so that the scheme, though handed down to us in Webb's drawings, may be attributed in the first place to his master?

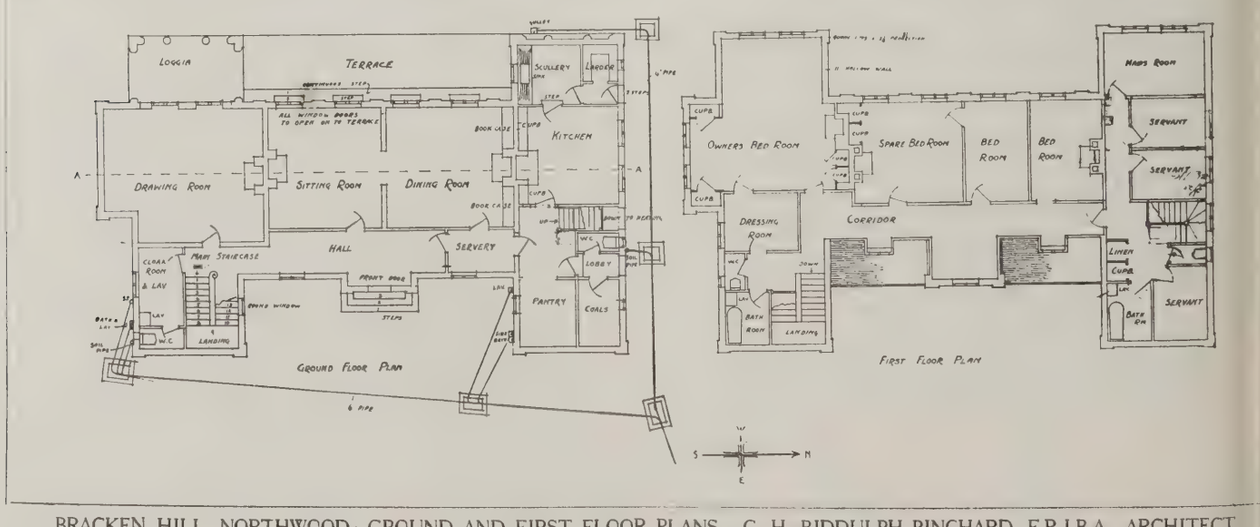
Replying, Mr. Gotch gave his reasons for attributing the design to Webb. Webb, he said, was the pupil of Ini Jones, and had access, not only to h Palladian knowledge, but also to h Italian books; but the real points favour of the Webb theory were thes The Jones drawings at Chatswor show designs simply for a Banqueti House to replace the destroyed buildin while all the drawings of the Pala scheme were in the hand of Webb. Jones had been the inspirer of the scher he would at least have made rou sketches of his ideas for Webb's guidanc and these would have been preserve There are, indeed, rough sketches of ide for the scheme, but they are all Webb sketches. In fact, in Webb's marg sketches and thumb-nail drawings y can trace the whole evolution of the ide Finally we know that Charles I instruct Webb himself to prepare designs for t palace. Taken altogether, therefore, t evidence points unquestionably at Web especially when it is remembered th the idea that Jones prepared the scher has no shred of proof, but is found entirely upon tradition.

Liverpool Architectura Society

A great deal of information concerni the various activities of the Liverpo Architectural Society (Incorporated) given in the last annual report of t council, a copy of which has just come hand. Eleven sessional meetings, a cc tume ball, eighteen meetings of the cou cil, and a number of interesting visi were held during the year. The coun were fortunate in securing for Liverpo the honour of that city being chosen the venue for the first of the annual pr vincial conferences of the R.I.B.A.

At the annual general meeting a pr sentation was made to Mr. E. Per Hinde in recognition of services render to the Society. The presentation to the form of a silver tea service, and w inscribed: "From Fellow Members of t L.A.S. to E. Percy Hinde, June, 1921."

The present membership of the Socie consists of forty-seven Fellows and sixt three Associates, a total of 110. The are also four Hon. Fellows, eight Ho Associates, and thirty-seven Students.



BRACKEN HILL NORTHWOOD: GROUND AND FIRST FLOOR PLANS. C. H. BIDDULPH PINCHARD, F.R.I.B.A., ARCHITECT.

Correspondence

The Unification and Registration Controversy

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The members of the R.I.B.A. have received an election circular over the names of Mr. A. W. S. Cross and others which is directed against the statement lately prepared by the Unification Committee. Most of it is either incorrect or misleading, or both, for it conveys the impression that the statement contains things which are not in it, and, on the other hand, that it omits important points which it does contain.

I need only say, briefly, that the original proposals for Unification have been neither abandoned, as stated, nor revised: the statement that we have recently issued conveys the original purposes of the Committee and, as far as I can see, nothing else. As for the qualifications of architects proposed to be invited to join us, the very first proposals in the first report dealt with by the Committee are devoted to this very matter, and to the steps to be taken in order to secure that those alone who possess proper qualifications shall take advantage of the invitation.

Of the four points set out as the policy of those who have issued the circular, the first relating to the voting power of the Associates is mere "vote-catching," annexing what the Council have already publicly announced as their policy.

The second one suggests that the present system of admission to the Institute is to be dropped. Nothing of the kind has been suggested or intended.

The third point, referring to a Registration Bill, is absurd in the mouths of people who say that Registration is either impossible or practically unattainable.

The fourth, bearing on bringing the allied societies into closer touch with Conduit Street, is an unwarrantable attempt to get election capital from the Council, who have been doing this very thing vigorously and with conspicuous success for two or three years with very little, if any, help from those who have signed the circular.

The things that have struck me most strongly in the Councils of the past two or three years have been the care with which they have considered the standpoint of the Associates and their real anxiety to secure co-operation between London and the Provincial Societies and among the Provincial Societies themselves; and no one can say that a great measure of success has not attended their efforts.

What I want is for the Council to draw up its detailed scheme for Unification, and then take a postal vote upon it from all members of the Institute.

ARTHUR KEEN,
Hon. Secretary, R.I.B.A.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—If Mr. Perks could get rid of the bee in his bonnet" to the effect that the Institute Council is out to wreck the Institute by its Unification proposals, he could be a much more useful friend to the Institute than he already is. Unfortunately the small creature appears to be constantly provoking him to all sorts of gymnastics, and now after a determined display of destructive criticism of the Institute proposals he is essaying a new trick for election purposes, and we find him in the latest manifesto, signed by himself and his troupe of trained performers, coming upon the stage with a couple of planks to assist him in the next act, the capture of the majority of the seats upon the Institute Council. It is, however, hardly playing the game to borrow the planks from the Institute That Associates should have the same voting powers as Fellows is a point which was settled long ago by the council, and the general body were notified to that effect. It would, I think, tax the ingenuity of Mr. Perks and his friends "to devise a scheme to bring the allied societies into closer touch with Conduit Street," as the association is already so intimate and satisfactory that I do not think it could well be improved. I speak with knowledge as I have served on the Institute Council for nearly three years as a representative of an allied society, and during this session have acted as chairman of the meetings of presidents of allied societies held periodically at the Institute, so that I know the views of the majority of the provincial presidents. So much for Mr. Perks's constructive proposals. I should now like to ask Mr. Perks three questions.

1. Is there any *detailed* scheme for "Unification and Registration" before the members of the Institute which defines the terms upon which architects are to be admitted to membership of the Institute in any class, other than by examination?

2. How could the Institute be wrecked by any proposals for "Unification or Registration" until a scheme has been submitted to and voted upon by the members?

3. Will Mr. Perks tell us what he is driving at?

Mr. Perks has sent out a list of nominations for the vice-presidency and the council, with recommendations as to voting. Before members do so, may I venture to propose the following points for consideration:—

1. The Institute proposals with regard to "Unification and Registration" are only tentative in character, but they have been approved by the "Unification and Registration Committee" and endorsed by the council in both cases practically unanimously. In both cases there were only two or three dissentient votes given by Mr. Perks and his followers.

2. These proposals constitute a really sound constructive policy for the future development of the Institute and the good of the profession.

3. The Institute is in a stronger position at present, and its prestige higher than ever before, because of, not in spite of, the fact that many architects have been admitted to membership without examination during the past twenty years.

If these facts are admitted, is it not then fair to assume that the present council is worthy of support, in order that it may bring to fruition the labours of the years since the war?

If so, then I should like to exhort all who hope for progress instead of stagnation to vote for the present members of the council who are solid for a policy of Unification and Registration, and are at least entitled to ask that they be enabled to submit a detailed scheme for "Unification and Registration" to the vote of the members, upon the lines on which they have been working so long and so unanimously.

HERBERT T. BUCKLAND.
Birmingham.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—So much has been said and written about this question during the past year that it is at first sight perhaps a little surprising to find two further pamphlets come to hand within a week endeavouring to state the case FOR and AGAINST.

Frankly I am an ardent Registrationist. I am also an ardent Unificationist, and, strange as it might appear to those who sign the pamphlet against it, I am also an *Associate*.

Except when desired constitutionally to do so by the Associates Committee—of which I am a member—(who have for several months been considering the matter) I have said and written nothing, feeling that my colleagues had a right to expect that no individual member of that Committee would "rush into print" until the views of the Committee had at least seen the light. This event having happened, I consider that to break the silence will no longer suggest disloyalty to my colleagues.

The pamphlet opposing "Unification" states that "there are two distinct policies now before the R.I.B.A. with regard to Registration." Such a statement is misleading and inaccurate. There is but one POLICY regarding Registration. What, however, the Council of the R.I.B.A. has decided to do is to endeavour to achieve Registration—admittedly not an easy matter—in two stages, the *first* stage being Unification. In other words, the Council considers it best that the child of their adoption ought naturally to crawl before it walks. The anti-Unificationists want to go one better than nature, and propose to make the child walk at the first attempt. But they are not quite sure that they want the child to walk at all, because having recently consulted a high authority they told us that "Registration cannot be obtained because no public case can be made out for it."

What, therefore, they really mean—if they mean what they say—is, we don't want Unification unless we get Registration also; but we know we can't get Registration, so let's stay where we are!

If this is progress, what then is retrogression? When all other societies and nations are striving to close dissent within their ranks and thereby obtain unity, are we, as a profession, to lag behind?

Is it not transparently clear that the profession—taking the long view—stands to gain tremendously if Unification only can be obtained? If, then, we desire to go to Parliament for Registration, we go with a united front, the R.I.B.A. taking charge with a solid profession at its back. But you are told it is the intention "to bring all architects of the United Kingdom into membership of the R.I.B.A. as a basis for Unification," and that by so doing the ASSOCIATE class will suffer.

If Unification or Registration (or both) is to be accomplished, all architects not at present within the R.I.B.A. must be brought within it, or neither of these objects will be achieved. Whatever sacrifice is necessary to be made by existing members of the R.I.B.A. to achieve this end, the Associates may rest assured that, when the Council has its proposals ready for the consideration of the general body of its members, it will be found that such sacrifices will be borne equally by *all* of its members. The *Associate* class will not be asked to make greater sacrifices than the *Fellows*. Meantime don't let us be side-tracked into the consideration of possible details until we are clear on first principles.

By deciding the principle the general body is not in the least pledged to accept any terms that may be put forward. They will doubtless be considered on their merits, and approved or disapproved or amended as thought by the general body to be desirable. Under whatever title or titles it is later found to be most desirable to classify architects who are not at present members of the R.I.B.A., it may safely be assumed that a right judgment on such a matter can be left to the general body of the R.I.B.A. members.

In conclusion I would add that destructive criticism is easy, but it takes us no further. Constructive or helpful criticism is not a subject which appears to commend itself to those whose names appear on the pamphlet issued from 45 New Bond Street, W.

HERBERT A. WELCH.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I have to thank the Associates of the R.I.B.A. who have written to me expressing their views in connection with the report of the Associates' Committee as circulated in January last, as well as the proposals in relation to Unification.

I regret that it is impossible for me to write to each one individually. I would, however, state in fairness to myself, that I cannot do otherwise than inform my brother Associates that, as the scheme set out in the report did not represent my views, or the views of certain provincial Associates of the Committee, I resigned my position as Joint Hon. Secretary.

H. G. FISHER.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—As frequent references are being made to the views of the Associates of the R.I.B.A. and the Committee appointed by them, we think it may be opportune to inform your readers of the present position of affairs.

On June 7, 1921, a Committee of Associates was appointed inter alia to ascertain the views of the Associates upon the so-called Unification scheme. It worked hard for some months, and on January 24, 1922, a meeting of the general body of Associates was held to consider the committee's report. As this report met with strong opposition the meeting was adjourned on the understanding that the report would receive further consideration and would be re-submitted. This, however, has not yet been done, so that up to the present no complete scheme or report has been approved by the general body of Associates.

It is apparent, therefore, that any rumours or statements as regards the views of Associates as a body must be entirely without authority.

"ASSOCIATES."

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—With reference to Mr. Perks's observations on the constitution of the Unification and Registration Committee, may I invite attention to it from another point of view?

Of the sixty-seven members, fifty-four belong to the Institute, and of the remaining thirteen, four represent allied societies, one represents the A.S.A.P.U., five represent the Society of Architects, and three are unattached to any architectural body.

The committee, to all intents and purposes, is, therefore, an Institute committee, which is probably the reason why the business during the last twelve months or so has consisted principally of matters affecting the Institute alone, in regard to which the outside members have no "locus standi." Therefore, whatever may be the merits or demerits of the memorandum issued by the committee, it represents the considered views of a body of men of whom the great majority belong to the same Institute as the members who have signed the minority report.

Yours faithfully,

C. MCARTHUR BUTLER.

Fire-resisting Construction Vindicated

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I have read with interest your article "Fire-resisting Construction Vindicated," and while I hesitate to differ from so reliable an authority as Mr. McCullough, I must say that my information as to the behaviour of the newly-constructed buildings attacked in the big fire in Chicago on March 15 does not bear out the claims put forward. All this will no doubt be cleared up when exhaustive reports on the fire have been made by the insurance interests and those technically interested.

In the case of the Burlington building, the fire started on the eighth floor and was carried upwards, the building being set alight from neighbouring buildings. If the press reports are to be relied upon, and they appear to be borne out largely by the evidence tendered at a subsequent enquiry conducted by the Chicago City Authorities, the Fire Brigade was not equal to the task of dealing successfully with a fire at such a height.

The value of sprinklers as a protection for high buildings is, I believe, exaggerated. To be of service a high pressure service of fire mains must be available, and if an outbreak of fire in the building so protected occurs some time after a fire has been in progress in a neighbouring building the pressure is liable to be considerably reduced by the demands of the fire appliances.

The advocates of higher buildings in London overlook the fact that these high buildings will endanger all other buildings in the neighbourhood, and will increase the fire insurance premiums. The provision of electric pumps to force water to upper floors is also likely to be overvalued, inasmuch as if the fire has got a firm hold of the building in which such appliance is installed, before there is an opportunity of getting it into operation (as might well happen), the appliance may have to remain unused. In fact, properly speaking, such pumps should be installed in the adjoining buildings not in the building for the protection of which they are installed.

Yours faithfully,

"READER."

The Commercial Ideal

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Creswell states, in your issue for April 26, that I have expressed my approval of the use of quotations from Ruskin's works for the purpose of advertising "rubbishy pretences at craftsmanship." I have not. My approval was, on the contrary, clearly qualified by the premise that the furniture was worthy of the high note struck by the advertisement.

It is true that there are some advertisements which deserve Mr. Creswell's condemnation as *traps, baited with the entrails torn from Art and high purpose*, but it is not just, because of these, to make such sweeping indictments as those to which he commits himself. It is an accepted fact amongst those experienced in such matters, that to excite by an advertisement expectations which the goods or services offered cannot satisfy, is a mistake which in the long run is certain to defeat the object of the advertiser.

Would Mr. Creswell quarrel with a railway company which displayed a poster by a Royal Academician with an appropriate quotation from Shakespeare in order to induce the town dweller to travel to the countryside? The poster would cheer even those who did not obey its prompting, and those who did respond would profit, in different ways, both themselves and the company which provided the facilities. In this arrangement I cannot see anything to outrage even the most delicate of sensibilities.

The main point upon which I am at issue with Mr. Creswell is whether, in fact (as his paper seemed to me to imply), commercial men are dominated by the false ideals which he so vigorously condemns. There are, of course, exceptions, but many of the most prosperous commercial undertakings exemplify the axiom that lasting success is most surely achieved by an honest discharge of the obligations towards both their employes and the purchasing public.

L. E. WALKER.

The Knickerbocker Theatre Collapse

Report by Expert Committee of Enquiry

IMPORTANT investigations have been made by a committee appointed by The Associated General Contractors of America into the cause of the collapse of the Knickerbocker Theatre at Washington, D.C., which resulted in the death of nearly a hundred persons. The committee consisted of Messrs. Rudolph P. Miller, consulting engineer, formerly superintendent of the building department, New York; James Baird, vice-president George A. Fuller Company; and Guy Mason, of Mason and Spauling, attorneys, Washington, D.C. Mr. W. P. Christie, Research Engineer of the Associated General Contractors, served as secretary and technical assistant to the committee.

The committee made an investigation of the plans and specifications for the theatre, the roof loads stresses in steel members as constructed, their position and condition after collapse, the condition of the walls, and all testimony given under oath at the coroner's investigation. A careful study has also been made of the various failure theories offered at the coroner's inquest or presented through the press.

The collapse of the Knickerbocker Theatre roof is attributed by this committee to unseating of the north end of the main truss, primarily through failure of the northernmost top gusset plate of that truss and the bottom chord where it rested on the Columbia Road wall. This half-inch gusset plate, which furnished the only lateral stiffness of a heavy upper chord, buckled to the west, and the lower chord where it rested on the wall, without reinforcement for bearing stresses and eccentricity, was crushed and tilted under a combination of tension, compression, and torsion, or twisting stress. This action culminated from many weaknesses of design, the most vital of which were as follows :—

First : The over-stressing of steel roof members which produced excessive downward deflection of the main truss. This over-stressing resulted from (*a*) using loads for the design which were greatly exceeded by the actual load, (*b*) from reducing the height of the main truss, as originally designed, and (*c*) from failing to splice the top and bottom moment plates which were placed on the truss in short sections, and did not butt together.

Second : The designing of the main truss bearing so that the centre of stresses fell on the edge of the wall, thus producing eccentricity and tension in the bearing.

Third : The failure to anchor trusses to the walls, especially over a short skew bearing at the wall support of the main truss. This design failed to provide for the additional outward thrust against the wall which developed at such a bearing when the truss was deflected.

Fourth : The failure to reinforce the bottom chord of the main truss where it bore on the wall or even to connect the channels of this chord where they extended beyond the gusset plate to form the bearing. Thus, no adequate provision was made in the bottom chord for three additional stresses acting upon it, over and above the load which it carried as a member of the truss. These stresses were : (*a*) the full load of the north end of the truss, (*b*) a twisting caused by the skew bearing, and (*c*) the tension caused by the centre of stresses falling on the edge of the bearing instead of at the centre.

Fifth : The omission of a cover plate at the junction of the top chord and batter post of the main truss, thus limiting the stiffness of the truss to that of a half-inch gusset plate at that point.

Sixth : The placing of a heavy concentrated load on a high and relatively thin hollow tile wall, neither adequately braced nor integrally bonded and further weakened by many openings and chases.

Seventh : Lack of adequate diagonal or other bracing throughout the steel structure, and especially around the two columns carrying roof trusses, thus providing insufficient rigidity to the structure as a whole.

One or possibly all of these weaknesses might have been present in the building without causing collapse—had their effects been distributed to various parts of the structure; but, unfortunately, it occurred that these effects combined and concentrated at the north end of the main truss. The culmination of this condition in a final collapse is summarized below :—

As already mentioned, the actual roof load greatly exceeded the design load; the main truss was reduced about 9 in. in depth from the original design, and its moment plates were neither butted together nor spliced. These factors all produced excessive downward deflection of that truss. This deflection, acting on the skew bearing, created a thrust at the Columbia Road wall which tended to push the wall outwardly and to twist the bottom chord of the truss. Either of these movements, occurring in but a small degree, was capable of unseating the truss, as its bearing perpendicular to the wall was only 6 in. and that parallel to the bottom chord 8 in.

To resist this twisting force the only stiffness provided was that of a ½ in. gusset plate and of the bottom chord in the first panel. The batter post could contribute nothing, as its rigidity was in turn limited by a ½ in. gusset at its upper end. Thus the bottom chord from the twisting force alone was probably in a hazardous condition. Furthermore, the two 12 in. channels forming this member extended beyond the gusset plate with their webs unsupported, forming an eccentric bearing.

These webs, therefore, took practically the full bearing load of the truss and the stress from its eccentric bearing as well as the twisting force. Under such a combination of stresses failure in the bottom chord, or bearing, was at some time almost inevitable. A condition existed that would have been dangerous with a thoroughly adequate wall, and when with this was combined a thin wall badly cut up by openings, a condition must have existed which awaited but an additional load, a measure of vibration, or fatigue of the over-stressed metal, to result in a collapse.

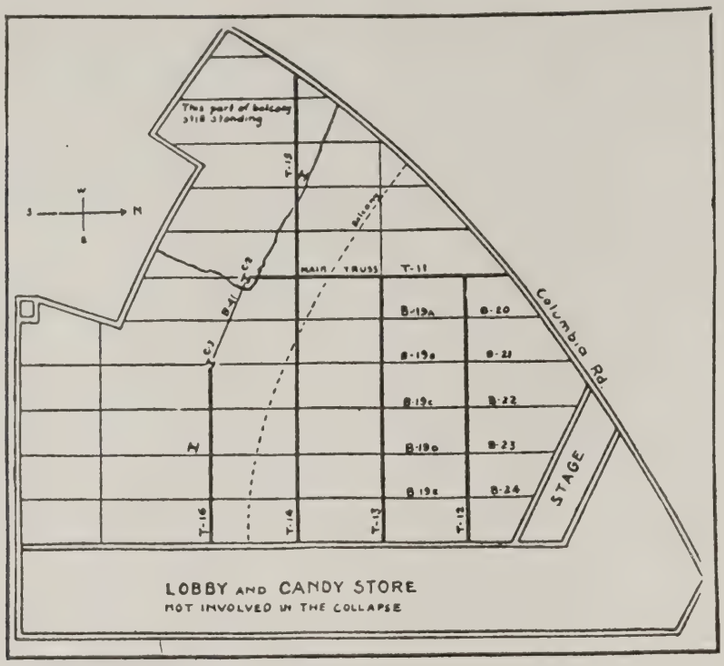
The additional load and probably the vibration and fatigue were present when the roof gave way. A snow load of some twelve or thirteen pounds per square foot, or about 16 per cent. of the dead load (computed from precipitation recorded by the U.S. Weather Bureau), exclusive of possible drifting, and the heaviest since completion of the building, was on the roof. Vibration from passing street cars had been noted on the structure, and was doubtless accentuated at times by a double 8 ft. ventilating fan carried on the roof. The snow load, which increased the dead load at the north end of the main truss some 15,000 lb., was, so to speak, the last straw in destroying equilibrium at the support. It undoubtedly provided the additional stress necessary either to buckle and twist the member resting on this bearing, or to buckle the gusset plate above. Which action took place first it is impossible to state, but that both actions did occur is shown by the distorted steel members and marks on the north bearing.

When the web of the east channel of the bottom chord buckled, the top of that member (not the whole truss) was twisted eastward, thus unlining the batter post, and moving the centre of stresses off the bearing. With the bottom chord in this condition only the lateral stiffness of the wall could prevent the truss from sliding off. This stiffness the wall did not have. It was pushed outward about 5 in.—sufficient to break its bond with the stage wall, to break the stage wall itself, and to allow the truss to drop.

Whether the upper gusset plate or the bottom chord channel failed first is immaterial, as either action would have brought about the other and would have thrown the batter post out of line. Once this member was displaced, collapse readily followed. Unlining, or distortion, of the batter post is a condition that easily results in failure of even a well-built truss.

No failure of an auxiliary truss was essential to unseat the main truss, and no failure of a beam, as they were actually erected, is believed to have been capable of causing a failure in the auxiliary truss. In no member of the steel, except the bottom chord mentioned, has any evidence of failure between supports and before falling been found. Collapse through a succession of preliminary failures seems highly improbable in view of the difficulty experienced in efforts to cause collapse when demolishing structures.

It is common knowledge to men of experience in the wrecking of old buildings that a sudden collapse or giving way of any large portion of the structure can be affected only by destroying a major supporting member. The only member of this nature existing in that area at which eye-witnesses say the failure began was the north end of the main truss, and the suddenness with which this truss collapsed seems to preclude the possibility



ROOF FRAMING PLAN OF THE KNICKERBOCKER THEATRE.

of its having been unseated by the failure of a minor member of the steel framing.

Various reports on the Knickerbocker have assigned the collapse to one or another preliminary failure, while at least two have located the initial action at the north end of the main truss.

With regard to defects of design the committee state : It is difficult to draw a distinct line between what constitutes design and what constitutes the detailed work of the designing service necessary to make it complete. Both elements, however, are a part of the whole field of design, and are therefore treated together in this section. These defects are as follows :—

1. The Columbia Road wall of the structure was not a safe wall for the heavy concentrated load placed upon it. It was approximately 40 ft. high, 18 in. thick, and not integrally bonded. About 45 per cent. of its length was occupied by openings. Even a solid brick wall of this height and length would have required a minimum thickness of at least 2 ft. to accord with good practice.

2. A skew bearing was used on this wall to carry the heavy concentrated load of the main truss, and no provision for anchorage was made. Such a bearing should have special consideration in its design to guard against the tendency to slide sidewise. The actual bearing surface was only 6 in. wide normal to the wall, and only a small movement of the wall or truss was necessary to cause unseating. The omission of anchorage was an infraction of the Washington Building Code.

3. The main column C-2 supporting the main truss was in itself given no lateral bracing and no bearing plate. Its ends were not milled, and at its connection with the column below was merely bolted through two splice plates which enabled it to carry practically no stress except a simple vertical load. This condition was greatly responsible for the completeness of the collapse which occurred in the vicinity of the balcony.

4. Sufficient lateral bracing to give the structure stiffness as a whole was not provided. This was a contributing cause to the collapse.

5. No reinforcement of the bottom chord was provided to take care of bearing stresses and of the canting action caused by the skew. This was one of the main causes of the collapse. The bottom chord shows conclusive evidence of failure through bearing.

6. The centre of stresses of the lower chord and batter post at the north end of the main truss came on the edge of the wall bearing, giving about 4 in. of eccentricity. This caused additional stress in the chord which was not provided for.

7. The channel of the bottom chord extended about $5\frac{1}{2}$ in. beyond the gusset plate at the north main truss bearing without a filler between the webs, so that their bearing strength was greatly reduced. These webs were thus dangerously overstressed, and one of them shows every indication of having failed before the truss dropped.

8. Moment plates on the top and bottom of the main truss were put in in sections and neither spliced nor butted together. They were thus unable to transmit the stress from one panel to the other, which forced the top and bottom chord channels to carry the full stress, this contributing greatly to the deflection of the truss.

9. No cover plate was placed over the batter post and top chord of the main truss. This limited the lateral stiffness of the compression chord to that of a $\frac{1}{2}$ in. gusset plate. This gusset plate failed at some time during the course of the collapse, and is one of the most critical weaknesses in the steel design.

10. Moment plates of the main truss were broken at panel points which were not supported laterally, thus decreasing the lateral stiffness of the truss. The top chord of the truss buckled at these points probably during the collapse.

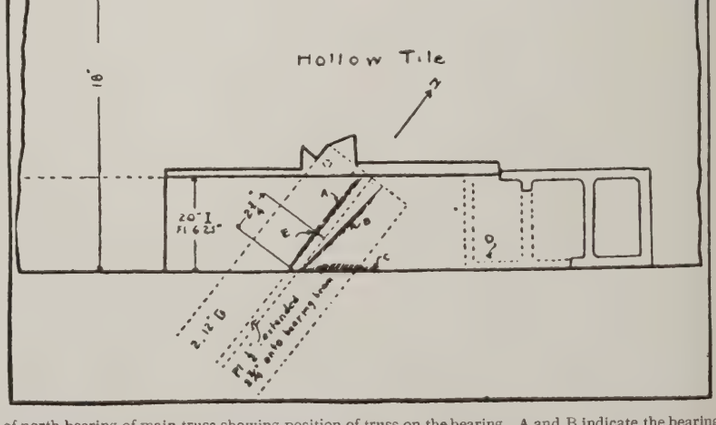
11. The distance between stress lines in the stress diagram was used as the outside dimensions of the truss, which reduced the effective depth of the main truss about 9 in. This also was a factor in increasing the deflection of that truss. Also the centre of stresses of the diagonals did not pass through the centre of stress at the panel point.

12. The roof slab was too thin for the load and length of span used, and while not a primary factor in the collapse, was a distinct departure from good practice and capable of producing a local failure.

13. The stress sheet shows no provision made for the load or vibration of the double 8 ft. ventilating fan carried on the roof.

14. The actual dead load of the roof as designed and constructed was about one third more than the load which appears to have been used in computing stresses. This added greatly to the deflection of the main truss, which was an important factor in the collapse.

Defects of construction consist of poor workmanship, use of faulty materials, and variations from the plans and specifications and building regulations. If the contractor furnishes the material and builds the structure as the architect



Sketch of north bearing of main truss showing position of truss on the bearing. A and B indicate the bearing marks made by adjacent edges of the lower chord channels, showing that these edges spread apart while the truss was on its seat. C indicates abrasion under the east flange of the chord. D indicates tile broken by the end of the truss and by a vertical strut framed on to the extension of the lower chord. E shows the north edge of the gusset plate.

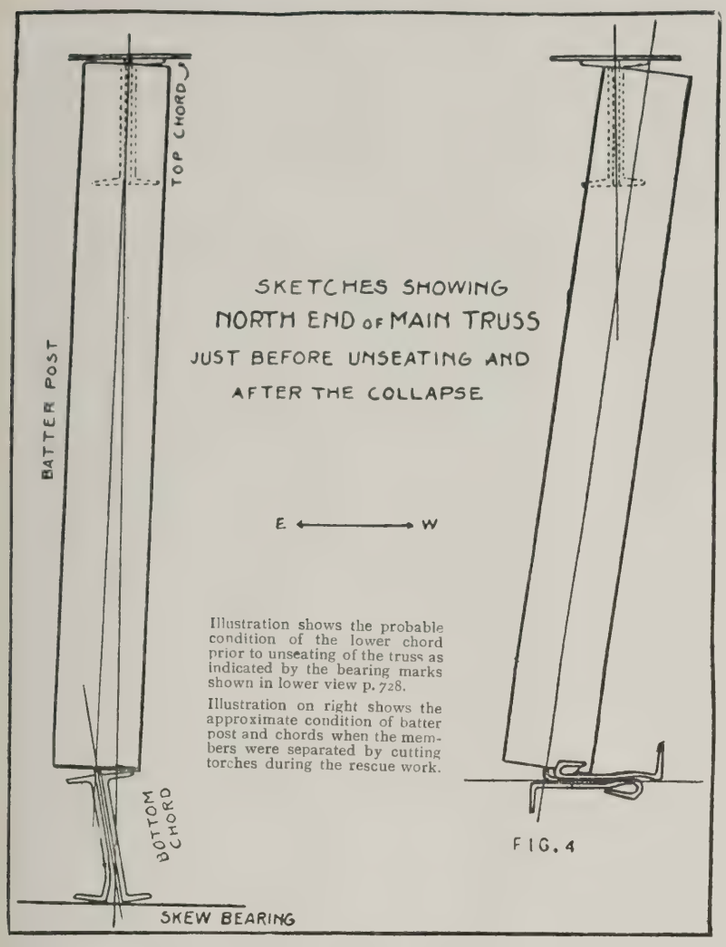


Illustration shows the probable condition of the lower chord prior to unseating of the truss as indicated by the bearing marks shown in lower view p. 728.

Illustration on right shows the approximate condition of batter post and chords when the members were separated by cutting torches during the rescue work.

FIG. 4

escribed it, then the structure's weaknesses are not considered as defects of onstruction for which the constructor as responsible. Defects of this nature ound in the Knickerbocker Theatre were s follows :—

1. The bearing plate of beam B. 24 was o placed that this beam had only a artial bearing at the wall. This defect, owever, apparently had no influence pon the collapse, as it was not unseated ntil the truss fell.

2. The strut over column C. 2 where it stened to the top of the bottom chord f the main truss was provided with four oles for anchorage to that member. he chord itself, however, was provided ith but two holes, thus two bolts on ne side were omitted. These holes ould have been bored and the bolts serted. This strut, however, bent over gainst the side which was not bolted, id the absence of these two bolts cannot e assigned any responsibility for the llapse.

3. A number of light-coloured hollow le were used, which were considered by me to be of inferior quality, but evience before the coroner indicates that sts of these tile have shown them to be the usual commercial strength.

4. The Columbia Road wall and the age wall were not bonded for a distance 6 ft. or 7 ft. at the top. Such bond as isted, however, was sufficient to break ie stage wall about half-way between e stage opening and the Columbia oad wall, so that this defect is not garded as a contributing cause of the llapse.

The committee state that investigation of the Knickerbocker disaster has forcefully emphasized four factors which have vital bearing upon the failure of this structure, and which this committee believes should be called to the attention of owners, engineers, architects, contractors, and public officials.

The expense of designing, drafting plans, and supervising the construction of a modern building are fairly well established, and the fees which must be charged an owner to cover the expense of this work and provide a reasonable profit are fixed within rather narrow limits. These fees cannot be substantially reduced without lowering the character of service rendered. They are generally adhered to by representative men of the profession, and are recognized as a reasonable minimum charge.

Some members of the profession, however, on account of strong competition in the architectural field and the tendency of owners to shop for professional services as they would for coal, will accept inadequate fees; and when they do are obliged to reduce the expense of design and supervision to such an extent that they are unable to furnish adequate supervision or complete plans, specifications, and details. This condition forces the contractor, whose function is not to design, to construct the building without sufficient drawings as best he can. The safety of a structure may rest upon these details, and failure of the designer to provide them constitutes a dangerous gap in his service. In the case of the Knickerbocker the plans and specifications were not complete, and testimony before the coroner showed that the inspection was inadequate.

In any building there are items of construction unforeseen by the designer which must later be added; but when, on a structure like the Knickerbocker, costing about $77,000, there are more than fifty such items, there would appear to have been incompetence, indifference, or both.

The committee recommends that the fees of architects and engineers be made sufficient to enable them to give competent and complete service. Fees recommended by the American Institute of Architects and the American Institute of Consulting Engineers are reasonable and proper and have had recognition by the courts.

Municipal building codes have generally developed independently by a process of accumulation, until it is now practically impossible for either an architect or a contractor to have cognizance of all the provisions in force in the various localities of his work. Many of those codes are deficient in vital particulars, to such an extent that an unsafe structure can be built without infraction of the regulations; for example, light and flimsy wall construction, which in the Knickerbocker Theatre was a weak element if not a direct cause of the collapse. A comprehensive and well-arranged code in any city would doubtless tend to reduce the possibility of disaster.

Licensing of architects and engineers before they are permitted to practise has been advocated by various groups within these professions for some time, but the effectiveness of this requirement in preventing disasters seems questionable. Such a measure might merely limit the number of persons engaged in these professions.

What is needed is a method of fixing a greater responsibility for sale and legal work. The committee believes that this can be accomplished by requiring designers, and constructors as well, in all branches of building work, to seek registration with the building authorities before permits are issued to them. Such registration should be withheld if the applicant is unable to show his competency, responsibility, and willingness to comply with legal requirements. In accepting the permit the registrant would further assume responsibility for the safety and adequacy of his design and for its execution in accordance with the conditions of the permit.

While the registration fee might be nominal the penalty attached to violations of the permit should be sufficiently exacting to make the provisions effective. Cancellation of the permit and loss of the right to operate for a given period would doubtless prove effective. Registration of this kind would tend to restrict the planning and erection of building to those who are competent and responsible—a result that is greatly to be desired.

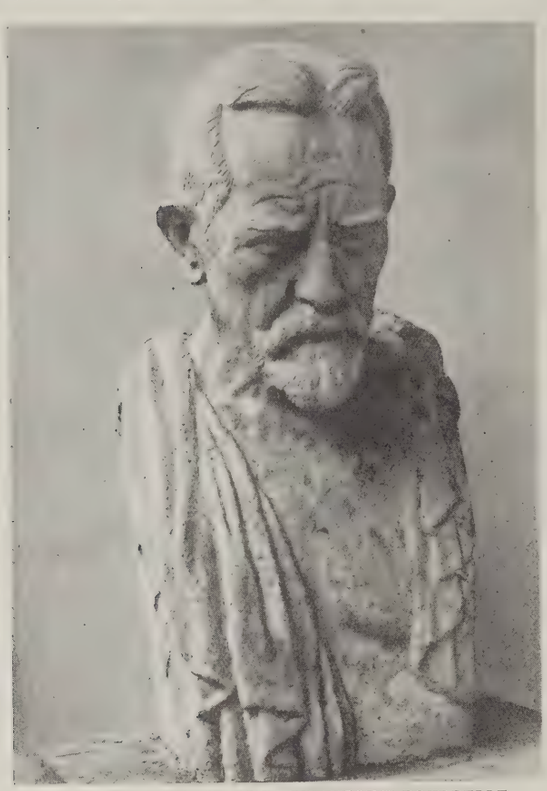
This committee recommends that engineers, architects, contractors, and public officials be urged to advocate application of these recommendations, and, if necessary, the adoption by proper legislative bodies of laws putting them into effect.

[For the foregoing particulars we are indebted to the "Contract Record" of America].

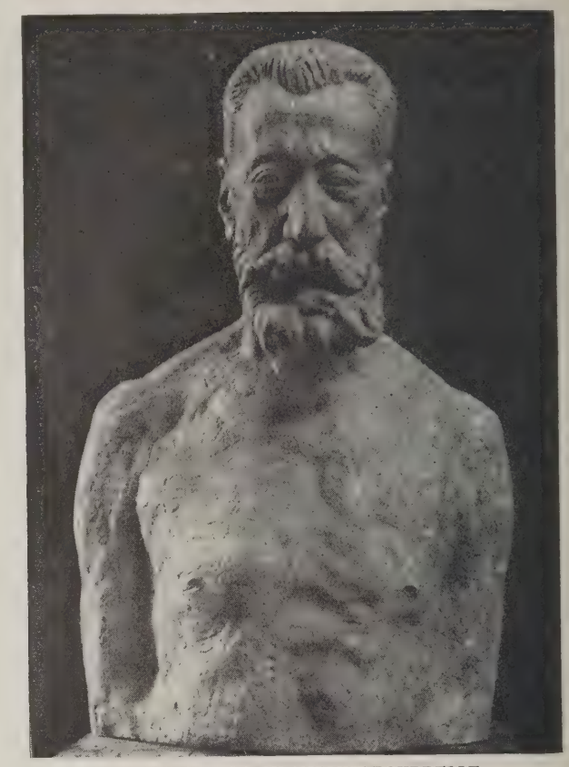
A Pictorial Review

Illustrations of Current, Practical, or Curious Interest

These pages are intended to contain illustrations of architectural "discoveries" of attractive pieces of detail, and of all kinds of objects of art interest, topical as well as historical. Sketches as well as photographs are admissible, and a fee of 2s. 6d. to cover out-of-pocket expenses will be paid for each illustration accepted. Contributions should be accompanied by short descriptive notes.



SIR JAMES G. FRAZER, LL.D., BY ANTOINE BOURDELLE.



ANATOLE FRANCE, BY ANTOINE BOURDELLE.

SURGEON KOEBERLÉ, BY ANTOINE BOURDELLE.

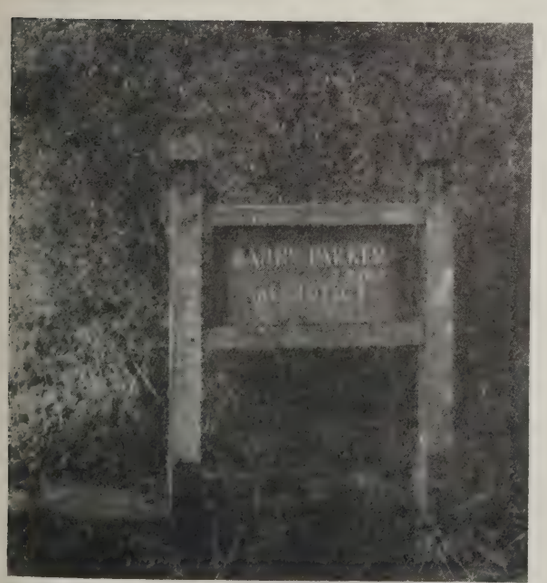
FISHERMAN AND NYMPH, BY P. G. BENTHAM, R.B.S.

The Royal Academy this year has three pieces of sculpture by Antoine Bourdelle. These are shown above. The bust of Anatole France was specially brought over in an aeroplane to be in time for the opening of the Academy, and is one of Bourdelle's latest works. "Fisherman and Nymph," by P. G. Bentham, is exhibited in the Octagon. It has attracted a good deal of attention.

An old house in Bideford is literally ornamented by two rainwater pipes which run down one on each side of a centre bay. The rainwater head illustrated above belongs to that on the left, and shows extraordinary richness and freedom of design. The other head is dated 1693 or 1698. G. D.

This photograph shows the masons' marks on stonework from Lingfield Parish Church, and is an example of a workman "signing his trade." By some these are supposed to be personal marks of "masters of works," by others the directions to the "setters"; or, again, they may be marks employed by the masons to recognize stones for the correct workmanship of which they are directly responsible. H. A. J. LAMB.

Ashe House, near Axminster, a wonderful piece of Tudor work, relying for its effect solely upon the proportions of the windows. Here John Churchill, afterwards the Duke of Marlborough, of Blenheim fame, was born in 1650.—F. C.



Possibly my name-plate will have some interest for architects. It is a combined scraper and name-plate, so is perhaps a little unusual. At any rate it proves convenient. The other photograph shows the approach to the offices by which the name-plate-foot-scraper stands. BARRY PARKER.

The Architects' Benevolent Society

The annual general meeting of the Architects' Benevolent Society was held at the R.I.B.A. on May 10, the President, Mr. Waterhouse, being in the chair.

The Hon. Secretary, Sir Charles Nicholson, read the minutes of the last meeting, and the President then moved the adoption of the report, a summary of which is given below.

The Report.

The Council note with satisfaction that there has been a greater accession of subscribers than in any previous year, and that the support accorded the Society has been brought more into proportion with the number of architects practising in the United Kingdom than has been the case hitherto. This result was largely due, in the first instance, to a suggestion made by Mr. Maurice E. Webb towards the end of 1920 that a special appeal on behalf of the Society should be made to members of the Institute, the Society of Architects, and the Architectural Association, asking those who were not already contributors to the Society to become annual subscribers of a guinea. The immediate result of this letter of appeal was excellent, and the effect of the appeal has been evident during the year on which the Council have to report. Both the number of subscribers and the amount received in subscriptions have practically doubled. For instance, the amount received in 1921 was £1,229 7s. 9d. as against £612 13s. 6d. received in 1920.

Apart from increasing the subscription list, the appeal had also the effect of bringing in many donations, which amounted to £544 16s. 6d. In addition to these the capital account was increased by a legacy of £500 from the late Mr. B. W. Webb, and by a legacy of £100 from Miss Raggett (the latter to be paid in five annual instalments of £20). The total amount, therefore, added to the capital account during the year was £1,064 16s. 6d.

In proportion to the increase in the Society's income the Council were able to afford a larger measure of relief, the sum of £1,684 12s. 5d. having been distributed among deserving applicants and the Society's pensioners.

The committee formed to administer the funds granted to the Architects' Benevolent Society by the Prince of Wales' Fund specially for war cases, of which Mr. H. D. Searles-Wood is chairman, has considered twenty-seven cases during the year, and has made grants amounting to £1,111.

The question of a Home for Aged Applicants was raised during the year, and various schemes have been considered; but the Council have not yet decided upon any scheme to bring before the members.

The five senior members of the Council retire by rotation, and to fill the vacancies caused by these retirements the Council have the pleasure to nominate: Mr. Thomas E. Collcutt, Mr. Lewis Solomon, Mr. Percy B. Tubbs, Mr. Arthur Sykes, and Mr. William Grellier.

The late secretary having, at the request of the Council of the Institute, undertaken the position of Editor of the Institute Journal, felt it necessary in October to resign his position as secretary of the Society. Miss E. H. Mann, M.A., was appointed assistant secretary. Mr. Dircks was thanked for his services to the Society and co-opted a member of the council.

Mr. Waterhouse commented on the improved financial position of the Society, and said there was still room for a further increase in the number of subscribers.

Mr. David Lewis and Mr. A. E. Kingwell seconded the election of the following as members of the council for 1922–23, and this was carried unanimously:

President, the President of the R.I.B.A. Members: Mr. W. Henry White, Mr. William Woodward, Mr. Maurice E. Webb, Mr. Henry M. Fletcher, Mr. H. D. Searles-Wood, Mr. Dendy Watney, Mr. Henry Lovegrove, Mr. Thomas E. Collcutt, Mr. Lewis Solomon, Mr. Percy B. Tubbs, Mr. Arthur Sykes, Mr. William Grellier, Mr. R. Dircks, Mr. E. J. Sadgrove (representing the Society of Architects), and Mr. W. G. Newton (representing the Architectural Association).

Mr. William Woodward, seconded by Mr. Henry Lovegrove, proposed a vote of thanks to Mr. Hilton Nash, who was subsequently re-elected for his services as Hon. Treasurer. Mr. Woodward made complimentary references to Mr. Nash's wisdom in administering the funds of the Society, and to the valuable restraining influence which he occasionally exercised.

Mr. Sheppard moved and Mr. Saxon Snell seconded, a similar vote of thanks to Sir Charles Nicholson, the Hon. Secretary, and on the motion of Mr. Hilton Nash the Hon. Auditors, Mr. C. H. Brodie and Mr. Henry Lovegrove, were also thanked. Mr. Lovegrove, in reply, insisted that the names of the auditors, Messrs. Scoffery and Sons, should be included.

A final vote of thanks to the chairman concluded the proceedings.

Devon and Exeter Architectural Society

The annual meeting of the Devon and Exeter Architectural Society, which embraces the counties of Devon and Cornwall, has been held at Plymouth under the chairmanship of the President, Mr. Anstis G. Bewes, A.R.I.B.A. (Plymouth). Amongst those present were: Messrs. A. S. Parker, F.R.I.B.A. (Plymouth) (Vice-President); P. Morris, F.R.I.B.A.; O. Ralling, M.S.A.; L. F. Tonar, Licentiate R.I.B.A. (Exeter); J. L. Fouracre, A.R.I.B.A.; B. P. Shires, F.R.I.B.A.; Victor Prigg (Plymouth); Allan J. Pinn, A.R.I.B.A.; and A. R. Holman, A.R.I.B.A. (Hon. Secretary) (Exeter).

The annual report was presented, and this, together with the balance-sheet, was received and adopted. The President referred to the death of Mr. Basil Stallybrass, of Plymouth. At this stage of the meeting a vote of sympathy was passed by all present standing in silence.

The President, in the course of his address, said that though no striking occurrences had marked the year it had been one of a considerable amount of necessary and useful work. The excursions to buildings of interest during the past year were well attended and much enjoyed. The suggestion had been made that the subjects set for the Measured Drawing Competition of the Society might correspond to those selected by the R.I.B.A. as "Evidences of Study." If permissible, that procedure might well bring more competitors into the field, as it would not involve much, if any, work over and above that expected from candidates by the R.I.B.A., and it would give candidates the advantage of plenty of healthy criticism of their productions.

After a cordial vote of thanks to the President the following officers were elected for the ensuing year: Mr. Percy Morris, F.R.I.B.A., President; Messrs. J. Crocker, F.R.I.B.A., and J. L. Fouracre, A.R.I.B.A., Vice-Presidents; Messrs. B. P. Shires, F.R.I.B.A., C. R. Corfield, A.R.I.B.A., Allan Pinn, A.R.I.B.A., R. A. Mill, J. Bennett, Licentiate R.I.B.A., F. Jerman, and B. H. Palmer, Licentiate R.I.B.A., Council; S. Dobell Hon. Treasurer; and A. R. Holman, A.R.I.B.A., Hon. Secretary.

R.I.B.A. Council Meeting

The following notes are from the minutes of the last Council meeting of the R.I.B.A. :—

A New Housing Committee.—The Council adopted a recommendation from the Practice Standing Committee and the Town Planning and Housing Committee in favour of establishing a new Housing Committee consisting of four members of the Practice Standing Committee, six members of the Town Planning and Housing Committee, six representatives of the Allied Societies, and additional members appointed by the Council, for the purpose of dealing with all questions affecting the subject of Housing.

Building By-Laws.—It was decided to appoint a deputation from the Royal Institute to urge the Minister of Health to extend for a further period of twelve months the relaxation of Building By-Laws under Section 25 of the Housing Town Planning, etc., Act of 1919.

The Abuses of Advertisement.—It was decided to join the "Scapa" Society in supporting Lord Newton's Bill for amending the Advertisements Regulation Act of 1907.

Reform of the London Building Acts.—It was decided to form a special Committee to consider the revision and co-ordination of the London Building Acts.

Discipline.—A member was suspended for twelve months for taking part in a competition the conditions of which were not in accordance with the R.I.B.A. Regulations.

Unification and Registration Committee.—On the nomination of the Society of Architects, Mr. A. J. Taylor, of Bath, was appointed to serve on this Committee.

Kenwood Preservation Council.—Mr. Alan E. Munby was appointed to represent the Royal Institute on the Kenwood Preservation Council.

Silicosis amongst Stonemasons.—The Council adopted and transmitted to the Building Trades Parliament a report from the Science Standing Committee on the subject of Silicosis amongst stonemasons.

The Conjoint Board of Scientific Societies.—The Council voted a contribution of £20 to the funds of the Board.

Unification and Registration

The Minority Report

THE following is an expression of the view of a minority of members of the Unification and Registration Committee on the statement on Unification issued by that committee. The statement of the main body of the committee was published on page 695 of our last issue :—

We are strongly in favour of Unification, but submit that the scheme suggested by the majority of members of the committee is not one that is likely to obtain it. Fundamentally it is entirely an optional scheme, under which men outside the Institute are to be allowed to join without passing any examination, and subject only to the approval of our Council, to a joint committee of the R.I.B.A. and the Society of Architects, or to some other tribunal to be appointed. But as under the scheme there must be architects who are either rejected or who do not desire to join the Institute, there can be no Unification of the profession, and it is obvious that the only way to obtain it is by a Registration Act giving legal power for its enforcement.

It was urged at the last meeting that the Associate Members of the R.I.B.A. strongly resent any admittance to their class without examination. However, the Unification Committee, although asked to do so, would not insert in their statement a clause relative to any test, but will be possible, under their proposals, for an indefinite number of men to become Associates of the Royal Institute of British Architects without passing any examination. This wilful omission of a saving clause clearly indicates that the majority of the committee is in favour of admitting unexamined men to that class, although the proposal is entirely contrary to the views expressed by many of our Associate Members. We trust Associates will strongly oppose the scheme not only on that account, but for other reasons mentioned in this report.

There are over 2,000 men in the allied societies who are not members of the R.I.B.A., and it is absurd to suggest that they should be admitted to the Institute with a view to the Unification of the profession, for, at the present time, these societies elect representatives to the Council of the R.I.B.A.

Unattached architects are bound to assist, and, apart from them, the Institute can now claim to represent every architectural society in England, except the Society of Architects. As, however, this Society was founded, primarily, with the view of obtaining Registration, it would not consistently oppose the principle of any Registration Bill; and, although it might object to details, doubtless agreement would ultimately be brought about. Consequently, we submit that, apart from unattached architects, a united profession could at once approach Parliament with a view to obtaining Registration. We fail to see why members of the Society of Architects and our allied societies should be allowed to enter the Institute without passing the statutory examinations. The Architectural Association is practically allied to the Institute, and the Official Architects' Association is desirous of working with the Institute in every way. For these and other reasons we consider that the committee's scheme of Unification is absolutely unnecessary, and we also regard the proposal to throw open the coveted membership of the Institute to all and sundry without the test of a professional examination as fraught with great danger to the future welfare of the R.I.B.A. During the final deliberations of the committee efforts were made—but unfortunately without avail—to elicit a plain statement of the intentions implied by the term "grouping into an organic whole within the Royal Institute of British Architects" of architects "properly so called." In our view, it is deplorable that a policy expressed so ambiguously should be promulgated.

It will be seen at once that acceptance of the committee's policy involves an entire change in the character of the R.I.B.A. as now constituted, and members are reminded that the present value of the Royal Institute to architects results from its having stood, from the time of its foundation, for what is best in architecture, and that it has appealed to and gained the adherence of its members precisely for the reason that it has required and maintained a high standard of architectural qualification from those connected with it. But for this, it is obvious that the worthy men within its ranks who have brought credit to architecture and developed a high standard of professional ethics would not have entered its portals. We are now asked, under the Unification policy proposed by the committee, to go back on these conditions and to accept the principle of admitting men into the Institute on a footing never before contemplated, and in a manner that, as it appears to us, must inevitably result in changing materially the whole standard of value upon which, hitherto, the Royal Institute has been judged.

Apart from rare exceptions, made in the case of architects of distinction, membership of the R.I.B.A. is now only obtainable by those who can satisfy the increasingly high standard of qualification required by the Examination Board. But under the committee's proposals these salutary restrictions must, obviously, be set aside, as it is clear that students will not work for and undergo difficult and costly examinations when they realize that others may be admitted by means that demand little or no sacrifice.

In the terms of the document to which we refer, Unification is said to be desirable, inter alia, *because* the "Institute, so constituted, would become numerically larger than any existing bodies, and thereby proportionately more influential." We consider this principle to be entirely false, as that which makes a learned body influential, and causes it to command public respect, is *not* the number of its members, but the *nature of the qualifications required for its membership.*

Again, whilst, as set forth in the statement, it is no doubt quite true that some of the now unattached architects and others "will not decline the advantages which inclusion (in the Institute) will obviously offer," it is, in our opinion, outrageous to claim that such admissions "will not derogate from the prestige and interest of those existing members whose membership of the R.I.B.A. is based on qualification by examination or other test."

Moreover, the Institute, regarding its representation of architecture and its control of architects in this country, is already, many times over, numerically larger than any other architectural society as at present constituted, and the recognition given to the value of its membership is adding to its numbers at an increasingly rapid rate. There is, in fact, every reason to suppose that if the present basis of the Institute is consistently preserved it will represent, before long, all that need be seriously considered in matters architectural. It is because we think this, and moreover because we consider that the great body of the Institute members will adopt the same view when they realize the vital importance of the principle now imperilled, that we express out most emphatic disagreement with the sequence under which the "Unification" policy, so called, is to be carried out. To suggest that "Unification," which involves combination with architects who do not necessarily hold similar views either upon architecture or ethics with those now adopted by the Institute would assist Registration is, in our opinion, another entirely incorrect assumption. We see no reason whatever why the Institute should not proceed at once with the promotion of a Bill for the Statutory Registration of architects, and thereby ascertain, in a practical way, whether Registration is, in fact, obtainable.

As the only body of architects existing in this country that has the slightest chance of promoting a Registration Bill with any success, it is difficult to understand why the Institute, representing as it does, with comparatively few exceptions, all the reputable architects of the country, should hesitate to adopt a policy for the benefit of the whole profession which it, and it alone, has any chance of carrying through with success.

Finally, without absorbing time in the useless discussion of details attached to a principle we believe to be entirely wrong, and altogether disastrous to the future success of the R.I.B.A., we beg to record our emphatic disagreement with the Unification Committee's proposals, and we hereby recommend as an alternative policy that steps be taken forthwith by the Institute to promote a Bill for the Statutory Registration of architects, and in the meantime to preserve its membership on the present basis.

Incidentally we recommend also that measures be adopted to secure for the Associate Members of the R.I.B.A. the full voting powers, hitherto enjoyed solely by the Fellows, and thus enable our younger members to participate in the affairs of the Institute to an extent to which they are entitled.

Mr. C. B. Flockton, of Sheffield, has written to the Unification and Registration Committee to express his disagreement with its statement on Unification, but as he was unable to be present at the last meeting we have not asked him to sign this minority report.

ALFRED W. S. CROSS,
Vice-President, R.I.B.A.
SYDNEY PERKS.
W. E. RILEY.
DIGBY SOLOMON.
Members of the Unification and Registration Committee.

A National War Memorial

Sir Aston Webb, President of the Royal Academy, has made the following statement to a representative of "The Times":

In explaining what was in my mind when expressing a hope at the Royal Academy dinner that the time had now come when a National Memorial of the Great War should be considered, I may premise by saying it was not by accident but intention that I omitted to name any particular proposal, as that is obviously a matter of far-reaching interest, and one on which varying proposals would have to be fully considered.

At a previous dinner three years ago I brought forward the same matter, and referred to a proposal which might prove a suitable memorial—namely, an improvement at Charing Cross, including the removal of the existing railway bridge and the substitution of a road bridge, or possibly a combination of road and railway bridge; also the removal of the station and hotel, and the formation of a "place" or square on which could be erected the war memorial itself in the form of a monumental building or monument, as might be decided upon hereafter.

If some such plan were adopted the bridge would, when constructed, form a pendant to Waterloo Bridge; and the "place" or square to Trafalgar Square, thus commemorating side by side the two great wars that took place at the beginning of the nineteenth and twentieth centuries.

Charing Cross being the very heart of the Empire, it is difficult to think of a more appropriate site or an improvement more needed. The station and bridge are altogether inadequate, and no mere tinkering to them can improve them, while the present surroundings on three sides are quite unworthy of their position.

It is evident that a proposal of this sort opens up many questions of traffic and convenience which would require careful consideration by properly constituted authorities, and the cost would be considerable. On the other hand, there seems little doubt that a worthy memorial amid a very appropriate setting could be placed here, and one that would appeal to the imagination of the people, and at the same time provide a very much-needed improvement in the centre of London. The cost, I have said, would be considerable, but there are several sources from which funds might be found, even supposing they were not forthcoming at the moment.

It seems desirable that a scheme for a National War Memorial should now be discussed and decided upon, even if it might not be possible to make a commencement with the actual work at once; indeed, some time must necessarily elapse before even the preliminaries could be decided upon.

This scheme would provide what has long been recognized as a necessi y—namely, improved road and footway accommodation across the Thames at this point, whether in conjunction with railway traffic or not. The distance between Westminster Bridge and Waterloo Bridge is very great, and the miserable footway on the present Charing Cross Bridge is totally inadequate. The great station of Waterloo recently opened by the Queen makes this need of direct communication more apparent than ever, passengers arriving at that station with baggage having to go round by Westminster or Waterloo Bridge to reach Charing Cross and the centre of London.

Another proposal I referred to at the dinner was the appointment of an Advisory Commission of Arts, composed of recognized authorities, somewhat on the lines of those that have been so successful in America, and to which such a proposal as this would most naturally be properly referred.

The main thing is that the great victory of "right over might" for which England fought should be worthily commemorated (like the great victories of Trafalgar and Waterloo) by some visible tribute to those who gave their lives for that object, and as a reminder to those who come after us of their duty to their honour and their country.

The Industrial Council for the Building Industry

The quarterly meeting of the Industrial Council for the Building Industry will be held at Montagu House, Whitehall, London, S.W.1, on Thursday, May 18, at 2.30 p.m., and on Friday, the 19th, at 10.30 a.m.

The agenda paper includes the following business:—

Minutes of last meeting and matters, if any, arising thereform.

Receive Treasurer's report.

Receive reports, if any, of the following Council Committees, and, if thought proper, resolve thereon: (*a*) Administrative Committee; (*b*) Safety and Welfare Committee; (*c*) Education Committee; (*d*) Management and Costs Committee.

Correspondence.

Consider what action shall be taken on the resolution of the National Federation of Building Trades Employers, with regard to the revision of rules of the Industrial Council. Mr. Thomas Foster has given notice to move: "That in view of the situation created by the resignation of the National Federation of Building Trades Employers, the Council shall be held in a state of suspense for one year as from the end of June next, and that the Administrative Committee as now constituted be kept in being for the same period, to be called together if occasion requires to deal with eventualities that may arise; further that a conference between the Administrative Committee of the Industrial Council and the Administrative Committee of the Employers' Federation be sought, with a view to seeing if it is not possible for the Building Employers' Federation again to take its place as a constituent part of the Council."

Arising out of the notice of the National Federation of Building Trades Employers the Administrative Committee recommends the Council to take steps to enabl the work of the Education Committee t be continued.

Date and place of next meeting.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Rebuilding of Cork.

From answers given in the House o Commons it appears that the rebuildin of the destroyed portions of Cork Cit will shortly begin. Sir Hamar Greer wood, the Chief Secretary for Irelanc informed Colonel Newman that his atter tion had been called to a statement mad by the leader of the Provisional Goverr ment of Southern Ireland that he ha been able to allot a substantial sum c money to start the rebuilding of that par of the City of Cork that was recentl destroyed. He was not aware, howeve that the British Government had ac mitted any liability in the matter.

Cheaper State Houses.

Replying to a question from Mr. Lyl as to the present tenders for houses unde State schemes, Sir A. Mond, Minister c Health, said that the lowest tender pric recently approved was £367 for a nor parlour house with three bedrooms which, with normal charges for land, etc would mean an overall price of, say, £43(This, of course, was one particular cas and he should hesitate to base gener conclusions on it or to give any gener answer as to what further decline in pric was necessary to be productive of a economic rent, beyond observing tha if the price level for this class of hous came down to the above figure or nearl approached it, he should certainly expe private enterprise to be able to take u again the provision of working-class house

Coming Events

Thursday, May 18.

Architects' and Surveyors' Assistant Professional Union.—Meeting at Caxto Hall, Westminster. Discussion on "Th Union and Reconstruction," to be opene by members of the Executive Counci

Industrial Council for the Buildin Industry.—Quarterly meeting of th Council at Montagu House, Whitehal S.W.1. 2.30 p.m., and Wednesday a 10.30 a.m.

Monday, May 22.

Architectural Association. — "Th Probable Effect on Architecture of th Decline in our Civilization." By Hilai Belloc. Nomination of officers an Council. 7 p.m.

Edinburgh Architectural Association.- Visit to Darnick Tower, Melrose, Melro Abbey, and Jedburgh Abbey.

Wednesday, May 24.

R.I.B.A. Annual Dinner at Princ Restaurant.

Thursday, May 25.

Chadwick Public Lecture at Belfast- "Housing and Town Planning." E Professor S. D. Adshead, M.A., V. R.I.B.A.

Illuminating Engineering Society.- Annual meeting at the Royal Society Arts, John Street, Adelphi. 8 p.m.

Law Reports

ɔn against Architects and Others

Box Co., Ltd. and the Paper Tube ox Co., Ltd. v. The Trussed Concrete Co., Ltd. and Wallis, Gilbert and Partners.

King's Bench Division.
Before Mr. Justice Rowlatt.

s was an action by the Healy Box .td., of Southwark Street, London, and the Paper Tube and Box Co., of Southwark Street, London, S.E., st the Trussed Concrete Steel Co., of Cranley Gardens, South Ken-ɔn, and Wallis, Gilbert and Partners, land Gardens, claiming damages for :d negligence by defendants in on to the erection of a factory.

cording to the statement of claim ɔeared that in 1917 the Paper Tube Box Co. were in negotiation with the siastical Commissioners for the ac-ɔion of a lease for eighty years of a in Lavington Street and Farnham ', Southwark, on which they pro-l to have a factory erected. The y Box Co., Ltd. were to act as con-ors for the erection of the factory. ɔeen July 1917 and June 1919 tiffs made a provisional arrangement the Trussed Concrete Steel Co. for upply of the building plans and also ɔe steel to be used and for the neces-constructional drawings. Messrs. is, Gilbert and Partners were to act rchitects. The war delayed opera-; till 1919, when the Ecclesiastical missioners began to press the Paper Co. to take the lease. One of the ɪs of the lease was that not less than ooo should be spent on the erection ɔe building, and that the Healy Box who were interested in the Box Co., ɪld join therein and guarantee the ɔrmance of the covenants. Prior to ring at a decision as to taking a lease ɔecame necessary for the plaintiffs ɔtain accurate calculations of the cost recting the factory, and one of the t important elements in the calcula-ɪs was the depth of the foundations. ntiffs thereupon instructed the de-ants to take the necessary steps to ertain what the depth would be. ntiffs alleged that defendants knew the decision as to the taking of the e depended upon the depth to which ndants reported that the foundations ld have to go down, and that de-lants were aware that upon the ɪracy of their report depended the of the factory. Defendants' firm as alleged reported orally, about May 9, that the depth would not exceed ft. The calculations as to cost based such report were satisfactory to plain-, and the Paper Box Co., relying upon ntered into an agreement to take the e and to spend not less than £25,000 he erection of the factory. Plaintiffs alleged that the defendants report inaccurate, because when excava-is were made it was found that it would necessary to take the foundations to a th of 18 ft., and extra cost would be ɪrred. Plaintiffs said the total extra t would be £7,500.

The Trussed Concrete Steel Co. denied the plaintiffs' allegations, and said the Healy Box Co. employed Messrs. Wallis, Gilbert and Partners as their architects and they denied that they were ever consulted as to the depth of the foundations.

Messrs. Wallis, Gilbert and Partners denied the plaintiffs' allegations, and denied any negligence or want of skill. They pleaded that they warned the plaintiffs that the site was unsuited for the erection of the factory by reason of its proximity to the river and the difficulty of estimating the depth to which the foundations would have to be carried.

Mr. Schiller, K.C., and Mr. G. F. Spence appeared for the plaintiffs, and Mr. Wingate Saul, K.C., and Mr. Vaughan for the Trussed Concrete Steel Co., and Mr. Colam, K.C., and Mr. Ricardo for Messrs. Wallis, Gilbert and Partners.

At the close of the plaintiffs' evidence, his lordship, on the submission of Mr. Wingate Saul, held that the case had broken down as against the Trussed Concrete Steel Co., and dismissed them from the action with costs.

Mr. Colam, for Messrs. Wallis, Gilbert and Partners, submitted that there was not a tittle of evidence here that his clients were ever employed or instructed to advise Mr. Sexton, either for reward or not, as to the advisability of going on with the building, having regard to the foundations. There was no evidence that it was a condition that the building was to go on only if the foundations were a certain depth. In any case, the contract being between his clients and the Healey Box Co., they had suffered no damage. Under these circumstances he contended that judgment should be entered for his clients.

After hearing Mr. Schiller for plaintiffs, his lordship said he was quite unable to say that the evidence he had heard rested upon a safe basis so as to put heavy liability upon another man. He could not act upon the plaintiffs' evidence as against the defendants', the architect's, and he thought the action as against them also failed, and there must be judgment for them with costs.

With regard to the counterclaim by Messrs. Wallis, Gilbert and Partners for fees, it appeared that they had received £500 odd, and were entitled to another £500 odd as the building proceeded.

Mr. Schiller said the defendants would be paid their fees as the work proceeded, and Mr. Colam accepted this, and his lordship said the counterclaim would stand over to see if this offer was carried out.

The Bradford Light and Air Dispute

Semon & Co., Ltd. v. Bradford Corporation.

Chancery Division.
Before Mr. Justice Eve.

The hearing was resumed of the action in which Chas. Semon & Co., Ltd., woollen merchants, of Bradford, were the plaintiffs, claiming, as against the Bradford Corporation, an injunction restraining the defendants from erecting an electrical station on the north side of Balme Street, Bradford, in such a manner as to cause an obstruction to the light of the windows of plaintiffs' warehouse.

The defendants denied there was any interference with the plaintiffs' light.

Mr. George Haslam, section director of the Bradford Dyers' Association, in giving evidence on behalf of the plaintiffs, said he knew their warehouses, and generally went there when there was trouble. His business, added the witness, was to examine faulty goods. If the merchant could not settle with a customer it was his duty to examine the goods in order to ascertain whether the fault was in the dyeing or with the manufacturer. Lighting was, for that purpose, of very great importance, and if possible a direct northern light should be obtained. A northern light was necessary.

In reply to Mr. Cunliffe, K.C., for the Corporation, witness said he thought most of the stuff merchants in Bradford had north lights.

Mr. Longbottom, a former stuff merchant in Bradford, and director of A. and S. Henry & Co., also said light in the warehouse of stuff merchants was important, and a north light was better than any other. If a firm had not got one, added the witness amid laughter, it did the best it could or went into bankruptcy.

Mr. Walter Jackson, architect, was recalled at the request of Mr. Cunliffe, and in reply to Mr. Tomlin, K.C., stated that when he estimated the amount of depreciation to the plaintiffs' property, he took into consideration the whole of the floor space with the exception of the basement and attic.

Mr. Cunliffe, K.C., opening the case for the defence, protested against any attempt to hold up the Corporation as a litigious body just because it resisted what it regarded as an improper claim. It was alleged in the statement of claim that the plaintiffs, because of their particular trade, were entitled to a special light; but now, after what had been said by witnesses and counsel, it was difficult to say what special light was claimed, and whether it was in amount or quality. It was quite wrong to state that the merchanting of piece goods was the staple trade of Bradford. There were many different trades carried on, and merchanting was not anything like the largest. Plaintiffs' claim was "We have got this light, and are entitled to it," and they did not appear to consider the quantity that would be left, an idea which was altogether against decisions of the House of Lords. There were many places in Bradford which managed to carry on this particular trade without a north light, and with very much less light than the plaintiffs enjoyed. A man was not entitled to demand in a city like Bradford protection for either a special quality or quantity of light. All the authorities showed that what was important to ascertain in a case of this sort was not what was the diminution of light caused, but what was the quantum of light that was left, having regard to the neighbourhood. The plaintiffs must show that what was left was not sufficient for the ordinary uses of mankind, and if they could not do that they had no legal right to complain.

Mr. Cunliffe, continuing his argument for the Corporation, said it was admitted

by witnesses for the plaintiffs that even after the erection of the proposed building plaintiffs' warehouse, compared with similar warehouses in London, would be well lighted. That being so, the plaintiffs would get all they were entitled to. They could not claim a better light than they would get in London, which was a lighter city than Bradford. Bradford was a grey, dark, gloomy place, with grimy buildings and a good deal of cloud about.

Mr. Percy J. Waldram, consulting engineer and lighting expert, stated that no standard of illumination had been fixed by Government committees. Plaintiffs' warehouse, compared with other Bradford warehouses, was in a very favourable position as to light, and even after the erection of the proposed building it would still be distinctly above the average.

Mr. J. A. Fletcher, deputy city architect for Bradford, said the proposed building was necessary in connection with the development of the city's electricity undertaking, and it would be a serious loss to the Corporation if they were unable to build on this corner site. The lower windows of the plaintiffs' warehouse were always very dirty so as to keep out a good deal of light. Even after the proposed building was completed the plaintiffs' warehouse would still be a good deal better lighted than the great majority of warehouses in Bradford. The letting or selling value of the building would not be affected.

Mr. Hughes: In designing your building did you try to do anything to avoid affecting the plaintiffs' light?

Witness: No. I did not think we should affect their light in any way.

Counsel suggested that much less injury would be done to the plaintiffs' light if the defendants cut off a small portion of their building at the corner of Balme Street and the back road.

Witness said it would be a great loss to the Corporation.

Mr. Fredk. Marsden, city engineer and surveyor of Bradford, said that the plaintiffs' warehouse abutted on wider streets than the average in the centre of the city.

The hearing was again adjourned.

Builders and Cancelled Contract

Tredegars, Ltd. v. Hammersmith Distillery Co., Ltd.

Court of Appeal.

Before Lords Justices Bankes, Scrutton, and Atkin.

This case came before the Court upon the appeal of the defendants from the judgment of Mr. Justice Sankey on January 26.

The plaintiffs brought the action to recover £154 loss of profit in the following circumstances: In December 1919 the defendants were minded to erect a grain store to adjoin their existing grain drying room, and they got their architect to prepare a sketch plan of the proposed building, and then the defendants got into communication with the plaintiffs, well-known builders and contractors, who entered into a contract to build the store for £1,554. Owing to objections made by the district surveyor the building could not be erected, and the objections necessitated a revision of the plans. At defendants' request plaintiffs were instructed to submit another drawing calculated to meet the proposals and requirements of the local authority. It was pointed out that the cost would be increased £727 if the district surveyor's suggestions were embodied in the substituted plan. After the second drawing had been prepared and submitted the defendants cancelled the contract, and the plaintiffs brought the present action to recover the sum in question.

The defence was that the original contract was cancelled by mutual consent, and that it was an implied term of the contract that neither party should be bound, should it be found impossible to construct the building in accordance with the specifications.

Mr. Justice Sankey held that the plaintiffs were entitled to assume that the consent of the authorities had been secured, and that the plaintiffs were entitled to recover. He accordingly entered judgment for plaintiffs for the sum claimed, with costs, and from this result the defendants now appealed.

At the conclusion of the address of Mr. Heber Hart, K.C., on behalf of the appellants, and without calling upon counsel for the respondents, their lordships dismissed the appeal with costs, holding that there was no mutual rescission of the first contract, or that the plaintiffs repudiated it. They accordingly held that the judgment of Mr. Justice Sankey should be affirmed.

Landed Properties Practitioners' Registration Bill

At the thirty-first annual dinner of the Auctioneers and Estate Agents' Institute of the United Kingdom, held at the Hotel Cecil, Mr. Arthur C. Driver, a member of the Council, proposing "The Houses of Parliament," said that the Institute was promoting a Bill for the registration of those who were practising in dealings in land. Later the Institute hoped to enlist the sympathies of Parliament in the matter of the auctioneer himself. At present any rogue could take out a £10 licence. That was a thing the Institute was proposing to put a check on.

Lord Riddell replying, said that the proposals in the bill which the Institute were bringing forward were most laudable, namely, to limit the operations of the profession to persons most qualified, and he should be glad to give it his assistance when it came before the House of Lords.

Sir Arthur Griffith-Boscawen, Minister for Agriculture, proposing "The Auctioneers' and Estate Agents' Institute," said he had no doubt that the Landed Properties Practitioners Registration Bill was an excellent measure, and that it would receive the Royal Assent in the fullness of time. The Institute had done much to bring about that fine level of integrity and business capacity which marked the auctioneers of this country. If the landowner was to live at all—and he wished to see him live, for the disappearance of those who managed their estates well was a national misfortune—there must be good, sound, and business-like estate management. He hoped the College of Estate Management might be the means of working a revolution in the management of estates.

Mr. Ernest J. Bigwood, the president, occupied the chair.

New Inventions

Latest Patent Applications.

11923.—Agar, R.—Wheelbarrow. 28.

11706.—Eshelby, J. D.—Hollow crete walls. April 26.

11986.—Kindstrom, C.—Hollow ing blocks. April 28.

12079.—Knight, R. E.—Construct steel reinforcement in forced concrete struc April 29.

11419.—Redman, J.—Building structions, and brick ele therefore. April 24.

11495.—Santarella, L.—Manufactu reinforced concrete truss roofs. April 24.

Specifications Published.

155262.—Eberling, C. M.—Machine making block tiles, and th from cementitious materia

156620.—Aktiebolaget Lean.—Bui blocks.

178181.—Fischer, F.—Hall structur

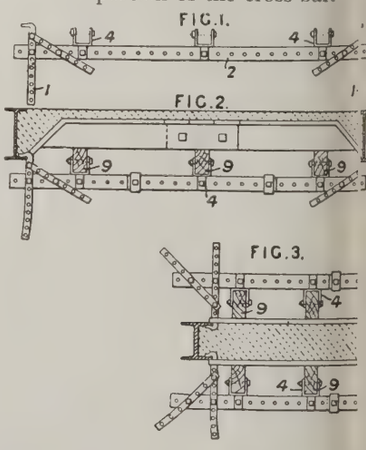
157201.—Beran, A.—Construction walls and the like of house other buildings.

157791.—Berkes, E. P.—Constructi floors, beams, pillars, and parts of buildings from h blocks.

178212.—Moss, J., Moss, J. W., Downing, G. H.—Roofing

Abstract Published.

176589.—Casting buildings in si Heath, W. G., 106 Green Crayford, Kent.—The shu ing for floors and walls are ported on longitudinal be 9 carried by supports 4 v are adjustably fixed to a l supported at each end by h 1 on the beams or ve stanchions. The bars are justably fixed to the hooks may themselves be made in parts relatively adjustable. supports 4 are formed of U-shaped members at r angles adapted to straddle cross-bars, and the beare the lower portion may only one leg so as to be justable along the overla portion of the cross-bar.



The above particulars are specially prepare Messrs. Rayner & Co., Registered Patent Agen 5 Chancery Lane, London, W.C. 2, from whom reade this Journal may obtain all information free relati patents, trade-marks, and designs. Messrs, Rayner will obtain printed copies of the published specifica and forward on post free for the official price of 1/-

The Week's News

Consulting Engineer's Estate.

. S. R. Blundstone, of London, ulting engineer, left £19,334.

New Flats for Fulham.

ork has begun at Fulham on the lling of over sixty flats for disabled ervice men.

Telephone Developments.

,500,000 is to be spent on the lopment of the telephone system. y exchanges are to be opened in ion and the provinces.

osed New Town Hall for Paddington.

addington Borough Council have er consideration a proposal to erect w town hall and municipal buildings n estimated cost of £100,000.

Paris Skyscraper Plan.

. is reported that a syndicate proposes erect an hotel in the Avenue des mps Elysées, Paris, similar to the scrapers of New York.

Scottish Architects : Charter of Incorporation.

he Charter of Incorporation has been cially granted to Scottish architects, er the style : "The Incorporation of hitects of Scotland."

New Town Hall for Hamilton.

lans have been prepared for a new vn Hall, at Hamilton, by Messrs. len, Lockhead and Brown, architects, milton. The outlay will be £25,000.

Mr. S. J. Dicksee's Estate.

Ir. S. J. Dicksee, director of Messrs. ter and Dicksee, Ltd., of Rugby and ndon, builders and contractors, left ,246.

Honiton Sewage Scheme.

The Town Council has decided to ask ssrs. W. H. Radford and Son, of ttingham, to advise on their proposed erage and sewage disposal scheme.

Blackpool Housing.

Blackpool Corporation will expend 57,000 this year on completing 676 nicipal dwellings, making a total penditure on housing of £750,000. Some 5 houses have been built and let.

Tyneside Town-Planning Scheme.

A conference has been held at Newcastle nposed of representatives of Tyneside al authorities for the purpose of con- ering the question of a joint scheme town planning.

Proposed New Chinese Railway.

The proposal to build a railway between algan and Kiachta is now being spon- red by Chang Chin-hui, the Tartar- eneral of Chahar, who is endeavouring interest certain capitalists.

Centenary of the Royal Academy of Belgium.

The R.I.B.A. has received from the oyal Academy of Belgium an example the bronze medal struck on the occasion the celebration of the hundredth niversary of the foundation of the tter body.

New Dwellings for Aberdeen.

Aberdeen Town Council have sanctioned the construction of eighteen plans of dwelling houses, the expenditure being £23,160. Other work (re-modernizing) is to be done to business premises at an outlay of £7,500.

Partnership Dissolved.

Messrs. Appleton and Johnson, architects and surveyors, Terrace Chambers, Strand, Torquay, have, as and from, April 5, dissolved partnership. Communications with reference to partnership should be addressed to Terrace Chambers, Strand, Torquay.

Architectural Practice.

Messrs. Parkes Lees, L.S.A., and Roseveare, architects, of Launceston, Cornwall, have completed arrangements for taking over the practice and offices of the late Messrs. Wise and Wise, architects, recently closed in that town owing to the death of Mr. Ernest Wise, M.S.A.

Watford Electric Light Extensions.

The Urban District Council are applying for a loan of over £40,000 to enable them to carry out electric light extensions. It is proposed to apply for a provisional order enabling a supply to be given to Hemel Hempstead, King's Langley, and Bovingdon.

Bournville Housing Schemes.

Housing schemes involving an investment of £75,000 have been launched by Cadbury Brothers, Ltd., at Bournville for the benefit of their workers. A special scheme for the erection of small houses and bungalows for women employees or pensioners is included.

Gretna's £9,000,000 Factory.

A wealthy syndicate has offered to purchase the Gretna munition factory, suggesting that a neutral valuation should be accepted as the basis of negotiations. The Disposals Board adhere to the valuation of their own officials, and a deadlock has occurred.

Edinburgh's New Exhibition Hall.

In the amended plans of Edinburgh's new Exhibition Hall, provision has been made for the erection of an imposing copper-covered dome. The hall, which will be constructed of terra-cotta brick with stone facings, is expected to cost from £40,000 to £50,000.

Lewes Castle.

At Lewes Mr. Charles Thomas-Stanford, M.P., F.S.A., at a luncheon given in his honour as donor, handed over to the Sussex Archæological Society the deeds of Lewes Castle. The Society thus becomes owner as trustee of one of the most important ancient buildings in the county.

Burlington Fine Arts Club.

A collection of pictures, drawings, and sculpture of the French School of the last hundred years is now being exhibited in the gallery of the Burlington Fine Arts Club, 17 Savile Row, W.1. The exhibition will be open from 10 a.m. to 5 p.m. on weekdays, and from 2 p.m. to 7 p.m. on Sundays until about the end of July.

Aldwych House Electrical Installation.

It is announced that Messrs. Francis Polden & Co., Ltd., of 56 Cannon Street, City, and 17 Wells Street, Oxford Street, London, have been entrusted with the electrical installation of Aldwych House. This is only one among many important contracts which this company have recently secured.

Lyceum Theatre to be Sold.

In the Chancery Division Mr. Justice Eve made an order, on the application of counsel for Mr. Frederick Melville, for the sale of the Lyceum Theatre and the partition of the proceeds between him and his brother, Mr. Walter Melville, the defendant in the action, who had put in an appearance, but not a defence.

Spitalfields Market.

Important proposals, involving an outlay of £2,000,000, for improving Spitalfields Market, are before a Select Committee. The market area is proposed to be extended, with various necessary street improvements, and power is sought to hold the market six days a week instead of two.

Lockerbie War Memorial.

In Lockerbie Market Square a war memorial has been erected from the designs of Mr. James B. Dunn, Edinburgh, A.R.S.A., F.R.I.B.A., architect. The design was selected in open competition, there being 120 competitors. It is a figure of Victory in bronze poised on a pedestal of granite. The cost is £2,500.

Harbour Development in China.

The Ministry of Communications has received tenders for the construction of harbour works at Hulutao. The cost of constructing the harbour is estimated at about $10,000,000, a sum which will be defrayed by the Fengtien provincial authorities and the Ministry of Communications. The work will take seven years.

Gift of a Home of Rest.

Mr. Henry H. Wills, a director of the Imperial Tobacco Company, has purchased Cote House, a mansion and estate of seventeen acres on Durdam Down, Bristol, where he will establish a home of rest for chronic invalids, to be chosen, as far as possible, from people of reduced means. Mr. Wills will furnish, equip, and provide an adequate endowment for the new institution, and is asking the Society of Merchant Venturers to administer it with the charities of the philanthropist Edward Colston.

Menin Gate Memorial.

During his tour of the battlefields King George expressed approval of the plan to build on the site of the old Menin Gate a triple arch memorial in honour of the men who were reported missing during the war in the salient. Sir Reginald Blomfield, in explaining his plans to the King, said that it was proposed to build an inner and an outer gate, joined together by a vaulted passage. The arch would span the whole breadth of the road, and on each side there would be passages

for pedestrians. On top of the gates a lion will stand, with its face turned in an attitude of watchfulness, while on the town side another lion sleeps peacefully. Scrolls will be placed inside the gateway, and on these will be inscribed the names of all the men who are known to have died in the Ypres salient, but whose bodies have never been recovered.

World's Largest Dancing Hall.

It is understood that an agreement has been signed by Mr. W. Booker, late of the Hammersmith Palais de Danse, and Mr. C. Hobson, manager of Ciro's, whereby they agree to lease for a period of ninety-nine years Messrs. Crosse and Blackwell's premises situated in Charing Cross Road. It is their intention to erect a dancing hall which will be the largest in the world.

L.C.C. War Memorial.

A memorial to the members and ex-members of the Council and members of the staff who fell in the Great War is to be erected at the New County Hall. It is proposed that the memorial shall take the form of a suitable inscription and a list of names, which will be placed on six marble panels in the galleries overlooking the ceremonial staircase of the building.

"The Spirit of Youth."

In our notice of the sculpture at the Royal Academy Exhibition (page 648 of the JOURNAL for May 3), we referred to "the poetical 'Spirit of Youth'" part of a memorial to be erected at King's College School, Wimbledon, as being "by the same sculptor." The sculptor we had in mind, however, was not the gentleman to whom that reference pointed, but Mr. Charles L. Hartwell, A.R.A., whose name we had just written in commending the beautiful memorial tablet to the late Sir William Ramsay, and the writer regrets that by overlooking the intervention of another name he inadvertently failed to credit Mr. Hartwell with his fine "Spirit of Youth" (No. 1381 in the Lecture Room at the Academy).

The Rebuilding of Moscow.

Colonel the Hon. Frederick Cripps has signed a contract with the Soviet Council of Moscow to rebuild a large portion of the city. Houses, shops, and public buildings are to be rebuilt, repaired, or completed. The Hon. Frederick Cripps intends to employ British architects and engineers on the work, and the bulk of the materials to be employed will be exported from this country. Although the scheme will commence in a very modest way, it is anticipated that the amount of money eventually involved will run into many millions.

R.I.B.A. Examinations.

The examinations of the R.I.B.A. will be held on the following dates :—

The Intermediate on June 9, 12, 13, and 15, 1922. Applications had to be sent in on or before May 6.

The Final and Special examinations on June 22, 23, 24, 26, 27, and 29, 1922. Applications must be sent in on or before May 20.

The Special War examination on July 3, 4, 5, 6, and 7, 1922. Applications must be sent in on or before June 2.

The Testimonies of Study, etc., with the necessary fees, must accompany all applications, all of which are to be addressed to the Secretary, R.I.B.A.

R.I.B.A. Colour Competition.

One hundred and seventy designs have been received in the Colour Competition, for premiums amounting in all to £200, which has been arranged by the R.I.B.A. The assessors are Mr. T. E. Collcutt PP.R.I.B.A., Sir Edwin L. Lutyens, R.A., Professor Gerald Moira, and Mr. Halsey Ricardo, F.R.I.B.A. Owing to absence on the Continent Mr. William Walcot is unable to act. The award of the assessors will, it is expected, be made public some time this week. The designs submitted will be publicly exhibited in the R.I.B.A. Galleries, 9 Conduit Street, W.1, from Monday, May 22, to Friday, June 2 inclusive. The exhibition will be open to the public (free) between the hours of 10 a.m. and 5 p.m.

Obituary

Mr. G. H. M. Addison.

It is with deep regret that we have announce the death of Mr. G. H. Addison, one of the most prominent arc tects in Australia. Born in Wales in 18 the son of the Rev. E. Addison, of Yo shire, Mr. Addison was articled to E. I. Hubbard, of Rotherham, archit and studied at the Royal Academy. went to Australia under contract for South Australian Government, which building large public works, and la left South Australia to go to Mes Terry and Oakden, of Melbourne, a fi which afterwards became known Messrs. Oakden, Addison, and Ker While in that city he was one of founders of the Melbourne Art Socie In 1889 he went to Brisbane to build London Bank of Australia and eventua commenced practice on his own acco in that city. At Brisbane many p minent buildings were erected from designs, including the Exhibition Bui ings, the Albert Street Methodist Chur the Commercial Union Buildings, Commonwealth Buildings. A few ye ago he took his son, Mr. G. F. Addis into partnership, and the buildi erected by them include the Anglic Church at Ascot, and Roman Catho Churches at Rosalie, Cannon Hills, a East Brisbane. He was chairman of Advisory Board of the Brisbane Gallery from its inception.

Mr. Arthur W. Cooksey.

We regret to announce that Arthur William Cooksey, F.R.I.B.A., 6 Adam Street, Adelphi, W.C., a Marchurst, Tonbridge, Kent, died su denly in London on May 4. He w fifty-six years of age.

Mr. Lacy W. Ridge.

Alderman Lacy W. Ridge, who was forty-six years architect and surveyor the diocese of Chichester, in wh capacity he was responsible for t restoration of many old churches, as w as the designing of new buildings, l died at Worthing, aged eighty-two.

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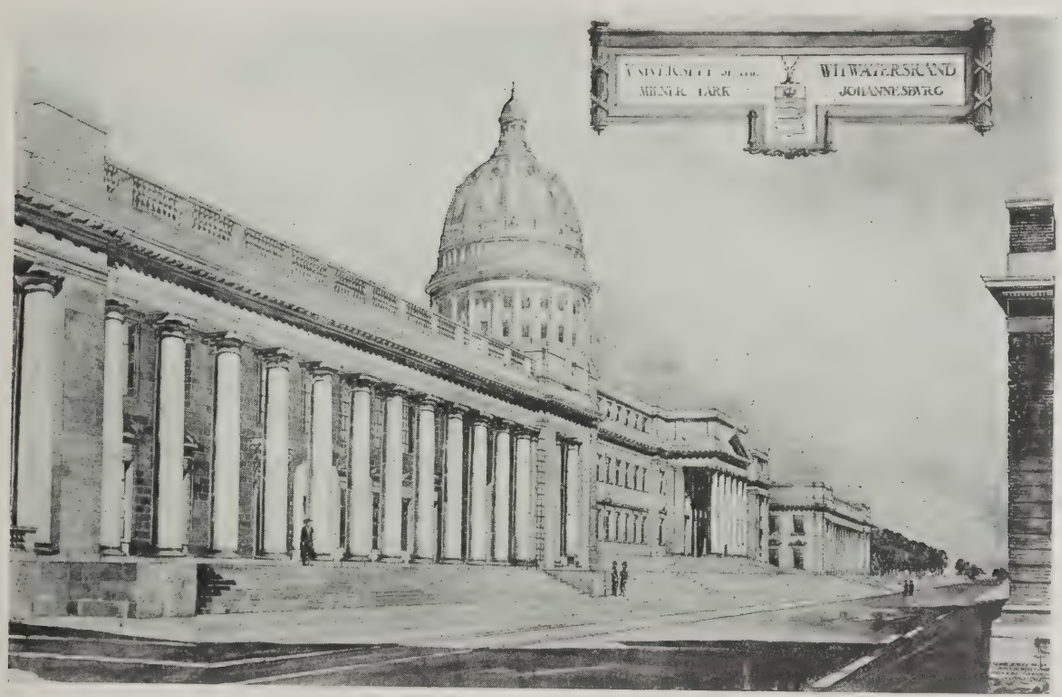
THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"



DESIGN FOR THE UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, SOUTH AFRICA.

This perspective illustrates the three main buildings of the University scheme now in course of erection at Milner Park, Johannesburg. These buildings are situated on a rocky ridge to the north of the town, and comprise the main University Hall and the principal faculties. In an open competition for the University buildings, the first premium was awarded to Mr. Frank Emley, F.R.I.B.A., and the second premium to Messrs. Cowin and Powers, F.R.I.B.A., but for the final scheme the authors of the first and second designs were appointed as joint architects. Further particulars of the scheme will be printed later. (A recent South African bank building designed by Messrs. Cowin, Powers, and Ellis, is illustrated on pages 766, 767).

27-29 Tothill Street, Westminster, S.W.1.

Monumental Architecture. 7.—Sculpture Group at Versailles

Jules Hardouin Mansart, Architect

The above illustration is taken from the exhibition of photographs by F. R. Yerbury at the Architectural Association, and shows one of the great figure groups before Versailles. The photograph realizes almost perfectly the sculptor's conception of the dark statuary in silhouette against the white building. Notice the subtle way in which the woman's face and shoulder have been caught in profile.

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Architecture in the Lay Press

IT is pleasant to note the steadily increasing attention to architectural and cognate subjects that is now being given by the lay Press. Architecture being "everybody's business," which is proverbially "nobody's business," most newspapers were for a time inclined to regard it as "caviare to the general." They thought that "it pleased not the million."

This period of excessive drought was a revulsion from the former treatment of architecture as a subject of interest to every "person of quality"—a practice that died out simultaneously with the "Grand Tour," and for similar reasons. The railway mania having set in, everybody did the Grand Tour, and everybody read the newspapers. The aristocratic affectation of a penchant for architecture died out, and the newspapers felt free to neglect a subject that had become unfashionable. Besides, all interests were swallowed up in the crude commercialism that had set in so suddenly and violently; and, a little later, the public mind was occupied by scientific speculation that was rather more fatal to art than the factory system, which at all events produced wealth and promoted building—so, of course, did science, but less immediately and in a lesser degree.

No doubt the excesses of Burlington, the vagaries of Walpole, the mock-Oriental lavishness of "Vathek" Beckford at Fonthill, the reckless extravagance of Sir Walter Scott at Abbotsford, had already brought such an expensive taste into discredit; at any rate the craze for building, and the pretension to patronize it, had died out rather suddenly, and there set in a revulsion of which the effects are still being felt.

Long after it had ceased to be considered the bounden duty of a gentleman to study architecture at first hand in Greece and Rome, certain periodicals, such as the "Gentleman's Magazine" (which had been founded in 1731, and was the first periodical to use the term "magazine"—"a monthly collection, to treasure up as in a magazine"), continued to give much attention to the subject; and how rich a treasury of information on architecture and kindred subjects the fine old magazine had become is evident from the subsequent publication, under the editorship of Sir Laurence Gomme, of a "'Gentleman's Magazine' Library" of some fifty volumes, made up in great measure of articles of architectural and topographical interest. For a century and a half, or more, "Sylvanus Urban, Gentleman," made such interests the staple of his magazine, which throve on them until eventually commercialism signalized a change of taste to which they failed to minister. The magazine lingered for several years; but its ultimate demise, some time in the 'sixties, convinced a new race of editors that the subjects on which it had so long subsisted had no further power of attraction. Nay, the "up-to-date" editor of newspaper or other periodical publication shunned them as lethal. Even the best newspapers hardly tolerated them, while according lavish hospitality to literature and the drama, music and painting—to every art except that of building, of which the newspaper treatment was at best but scanty and casual.

It was assumed, somewhat prematurely, that the public did not care to read about architecture; while the public, for their part, gradually and by degrees lost all conscious interest in a subject the newspapers so persistently ignored. It was the gyration of our old acquaintance, the "vicious circle."

To this scandalous and unwarrantable neglect there have been always honourable exceptions. The more dignified and distinguished of the newspapers, both in London and in the country, maintained the tradition that, no matter how apathetic the "masses," the "classes" liked to see in their chosen periodicals an occasional reference to so refined a subject as architecture. Occasionally it was accorded hospitality in the Reviews, where Sir E. Beckett Denison's diatribes, or Mr. Emmett's sardonically humorous censures, or, finally, Mr. March-Phillipps's graceful perversities, were each and all welcomed as leavening the mass. More than any other contemporary writer, Mr. March-Phillipps was successful in showing how fascinating a subject architecture can be made in the hands of a skilful writer, and eventually the "Morning Post" offered him a large audience to whom to preach, at regular and frequent intervals, the gospel of good building. He was thus able to convince many readers and a few editors that architecture is a subject that can be invested with singular charm by a capable writer, as Ruskin had proved long before.

Mr. H. Heathcote Statham has done excellent service in the same field; and many articles and reviews in the "Times" and its various supplements have dealt with the subject in such an attractive as well as informative way as to occasion keen regret that they have been nearly always anonymous. These scholarly yet graceful writers have been fortunate in the steady supply of good architectural works for review—works that have in many instances taken rank immediately as classics—as witness the names of Blomfield, Jackson, Gotch, Ward, Walcot, Rickards, and others.

It is indeed gratifying to find that so many of the high-class weekly newspapers and reviews show an ever-increasing tendency to recognize the interest and importance of the subject—notably the "Sphere" and "Country Life," both of which often illustrate architecture very finely, and in fact treat it competently in every way.

From the weekly London newspapers, it is surely not invidious to single out the "Observer," which stands in a class by itself for the constant attention it gives to architecture and cognate arts. In newspapers published in the provinces there is a marked revival of interest in such subjects. Where schools of architecture flourish, as at Liverpool and Manchester, this was to be expected; but in mere justice it must be added that the "Manchester Guardian" needed no prompting in this duty; throughout its long and entirely honourable existence, it has always treated architecture as a subject of unquestionable interest and first-rate importance. In fact, as Lord Northcliffe, with characteristic generosity, said of it the other day, the "Manchester

Guardian" is "by common consent the ideal newspaper." It would not have deserved that high "praise from Sir Hubert" if it had slighted architecture, which, as a matter of fact, it treats more fully and more knowledgeably than any other provincial newspaper we can call to mind. It never professes, but ever pursues the highest ideals.

So popular has the subject become, that a long list of London or country newspapers that give more or less systematic attention to architectural subjects could easily be made, had we space for it. To one and all we offer our sincere congratulations on their enlightened policy. Especially would we acknowledge the important services rendered by the newspapers with mammoth circulations such as the "Daily Telegraph," "Daily Mail," and "Daily Express." which have all rendered this important service to the community. The "Mail" and the "Express," indeed, have not contented themselves with description and discussion. They have actively promoted "Ideal Home" exhibitions and housing competitions. Then the London evening papers have occasionally taken up the subject with vigour on suitable occasions.

We cannot withhold a rather special vote of thanks to the "London Mercury." This literary monthly holds a position somewhat similar to that which was formerly occupied by the "Gentleman's Magazine" as aforesaid. That is to say, its contents make a special appeal to cultivated taste. It has even had the courage to give a monthly dissertation on architecture; a contribution that, ably, variously, and impartially treated by Mr. A. R. Powys, is, we are sure, an unfailing source of enjoyment to others besides architects.

All things considered we feel justified in the assurance that at length we are in the midst of a great revival of public interest in architecture. We are especially glad of this, because we have tried to support in various ways the movement for popularizing architectural subjects in the lay press; for, as we have said, architecture in England obviously has suffered acutely for lack of the support and the stimulus which the lay press alone could afford. The professional press, of course, has a distinct mission. It serves the profession rather than the general public. But we have always recognized that to help the lay press is to help the profession; for the more the public become intelligently interested in building, the better will building be. It is through the power of the press that the architect will come to his own. It is therefore encouraging to see the good work the Press is doing in the promotion of good building.

The Higher Buildings Controversy

In another letter to "The Times" Mr. Delissa Joseph reiterates the arguments in favour of higher buildings, and he expresses the opinion that "it would have been preferable if the Royal Institute of British Architects had seen its way to move with the times and to take this matter under its ægis; but the fact that it has declined to do so has not succeeded in closing the movement, which is being pursued from the outside by powerful interests who refuse to let the matter rest." What exactly is the character of those interests? It does not seem to be markedly æsthetic, or Sir Aston Webb and Sir Ernest George would not, with the R.I.B.A., be ranged on the other side. Indeed, the chief recommendation hitherto put forward by the advocates of taller buildings for London is concerned with monetary issues. Sites and leases would bring in more money for the owners. That, however, is not a conclusive argument, the cult of the Almighty Dollar not having yet reached in this country the pitch of intensity to which it has attained where gargantuan buildings disfigure the cities. As we have frequently observed in these columns, opinion in this country is generally, and rightly, opposed to the erection of skyscrapers. There is, however, much to be said in favour of higher buildings in certain specified positions.

"Spy" as an Architect

It will have surprised many to read, in the obituary notices of the late Sir Leslie Ward, that the great caricaturist was a convert (or pervert, according to taste) from the profession of architecture. He was sent to the office of Sydney Smirke, R.A., but did not care much for architecture, except as a subject for his brush, and when Smirke retired, young Ward declined the invitation of Edward Barry (not then knighted) to article himself to him for three years. W. P. Frith got him permission to enter the Royal Academy Schools, where he began to paint portraits, but became a caricaturist through delighting Millais with a bookful of caricatures made mainly at school. Ward was at once introduced to Mr. Gibson Bowles, who then owned "Vanity Fair," and caricaturing his contemporaries brought him fame and, in 1918, a knighthood. But, as the Lord Chancellor said in presiding at the dinner given in honour of Ward, he was a humorous portraitist rather than what is usually understood by the term "caricaturist." Among his frequent exhibits at the Academy, many architectural drawings were included, and there is no doubt that he would have become an excellent architect if he had not preferred to become a caricaturist.

Indemnity for the Architect

Of late insurance has been made immensely popular. No matter how, the idea has become familiar as never before. Insurance offices are astute enough to trim their sails to catch this favouring breeze. They are issuing an architect's indemnity policy, which meets all claims based on "neglect, default, or error of the assured." Claims based on these grounds are frequently brought frivolously by litigious and "difficult" clients, and sometimes inflict undeserved hardship on an unoffending architect. Or, again, a heavy claim may be made, and possibly succeed, on account of matters for which the architect is not morally responsible, but may nevertheless be held to be answerable legally. Architects who have seen such cases, or who have suffered from them *in propria persona*, will be freed from a considerable load of anxiety if they can, for a slight fee, procure indemnity against such contingencies.

Pavement Advertising

Tempting offers for leave to disfigure with advertisements the street pavements are being everywhere rejected. It seems to be generally felt that they are sufficiently disfigured already, mainly because, as a rule, they are not properly scavenged. Possibly, indeed, they would be kept cleaner to preserve to the advertisements whatever of sightliness might be intrinsic to them. But it is not thus that London should be brightened, and most sincerely we trust that it may never be forced by poverty to pay its footing by such unseemly means.

"The Fiends of the Broom"

We see from "The Devon and Exeter Gazette" that "the broom fiends are busy in the streets of Exeter once more." It seems that they disturb the microbe-laden dust at inconvenient hours of the day. As a fact, all hours are equally inconvenient for so primitive and insalubrious a performance. Our Exeter contemporary justifiably complains that while "thousands of pounds are spent in this country in an endeavour to improve the health of the nation, yet, in Exeter at least, the fiends of the broom remain." Sweeping, when one comes to think of it, is a curiously primitive process. The "broom fiend" is in an offensive alliance with the disease germs, and should be suppressed. In London the squeegee, acting in co-operation with the hose, has to a great extent superseded the dust-disseminating broom; but why not be thoroughly up to date and use a vacuum cleaner? That would absorb the dust and germs instead of scattering them; but too many local authorities seem to be unaware of its existence.

The R.I.B.A. Colour Competition

A Criticism

The designs submitted in the recent Colour Competition are now on view in the Galleries of the R.I.B.A., 9 Conduit Street, where they will remain on exhibition until June 2.

FEW things are more liable to bear a varied appearance, to change with a difference of lighting or climatic conditions, than a decorative scheme of colour. It is notorious that combinations of tints that to us appear crude and garish, to be thrown together without skill or purpose, and without thought of their relationship, are blended by the bright sunlight of a tropical country into those rich and gorgeous harmonies we are too apt to term "barbaric" splendour. Lacking such modifying influence, the grey skies and cooler sunshine of more northern countries call for colours less violently opposed, colours requiring, as it were, less inducement from without to fall in with a general scheme of order. Further north again, in Scandinavia and Northern Russia, bright and even crude colour finds a place as a welcome contrast to the pervading gloom or whiteness of the land. We find it in the painted wooden houses, in the dress of peasants, and in the articles of their daily use.

London, though the Londoner in honour bound must chide at his weather, suffers not the extreme of an intense hot light nor a cold grey bleakness. We can justify the use of brilliant colour neither by long snowbound winters nor by fierce sun-dried summers. The colours most suited to our climate would seem to be those of a medium strength and, if one may so use the word, of a "wet" character. This, at least, appears to be the viewpoint taken by the assessors of the recent competition held under the ægis of the R.I.B.A. for the decoration in colour of a London façade. The three winning designs present schemes of colour, for the most part in quiet greens, blues, and browns, with the strong colours, red, purple, and orange used sparingly as foils and aids for the general conception.

The immediate problem of the competition is the design of the 50 ft. wide street façade of an ordinary six-storied London building, a design "in which colour would be the dominant feature." The ground floor, with two entrances at the side, would be a bank or insurance office, and the upper floors, flats or offices. It is further suggested "that pronounced architectural features should be confined to the entrances and the topmost story."

The winning design (No. 147) by Mr. Arthur E. Pierce, shows a quiet and reasonable scheme in green, white, and blue ceramic ware, the position of the various colours being well arranged in relation to each other. As an architectural composition, apart from the colour, it needs a stronger horizontal connection between the sides at top and bottom. Mr. John S. Lee (No. 93), who gains the second place, again favours a harmony of blue, white, and green. The blue in the upper story is a little too insistent, but it has a strong foil in the brown doors of the ground floor. The design placed third, by Mr. G. L. Owen (No. 130), shows a sound conception quietly but efficiently treated in white and brown, to which a sparkle is given by the judiciously disposed spots and lines of red and blue. The only point at which criticism may be unquestionably directed is the unfortunately placed blueness of the cartouche on the cornice.

A fourth premium was awarded to the design submitted by Messrs. H. S. Fleming and W. J. Kieffer (No. 78) for architectural merit apart from colour decoration. This design is boldly and simply conceived, though justice is scarcely done to it by the drawings.

The assessors, Messrs. Thos. E. Collcutt, Halsey Ricardo, and Professor Gerald Moira, have further selected eight designs for honourable mention. Mr. Elfric H. Smith (No. 32) makes use of mosaic panels in a general colour scheme of blue and reddish brown, while a stronger conception is shown in No. 61 (Mr. Frederick Barber) where the black walls of the lower story, the white of the upper, and the crowning band of red, yellow, and blue, combine in a strong decorative effect. No. 84, by Mr. Harry Simeon, is mainly clothed in green, and spanned, for no apparent reason, by two blue arches about midway between ground and cornice, while the central pilaster running up the greater part of the façade is not conducive to a unity of design. It is a relief to turn to the scholarly conception of Mr. H. F. Billimoria (No. 86), whose design, albeit reminiscent of the manner of Alexander Thomson, strikes a forceful and original note. The principle colour is green, set off with bands of blue and red, and supported by stronger colour in the ground story.

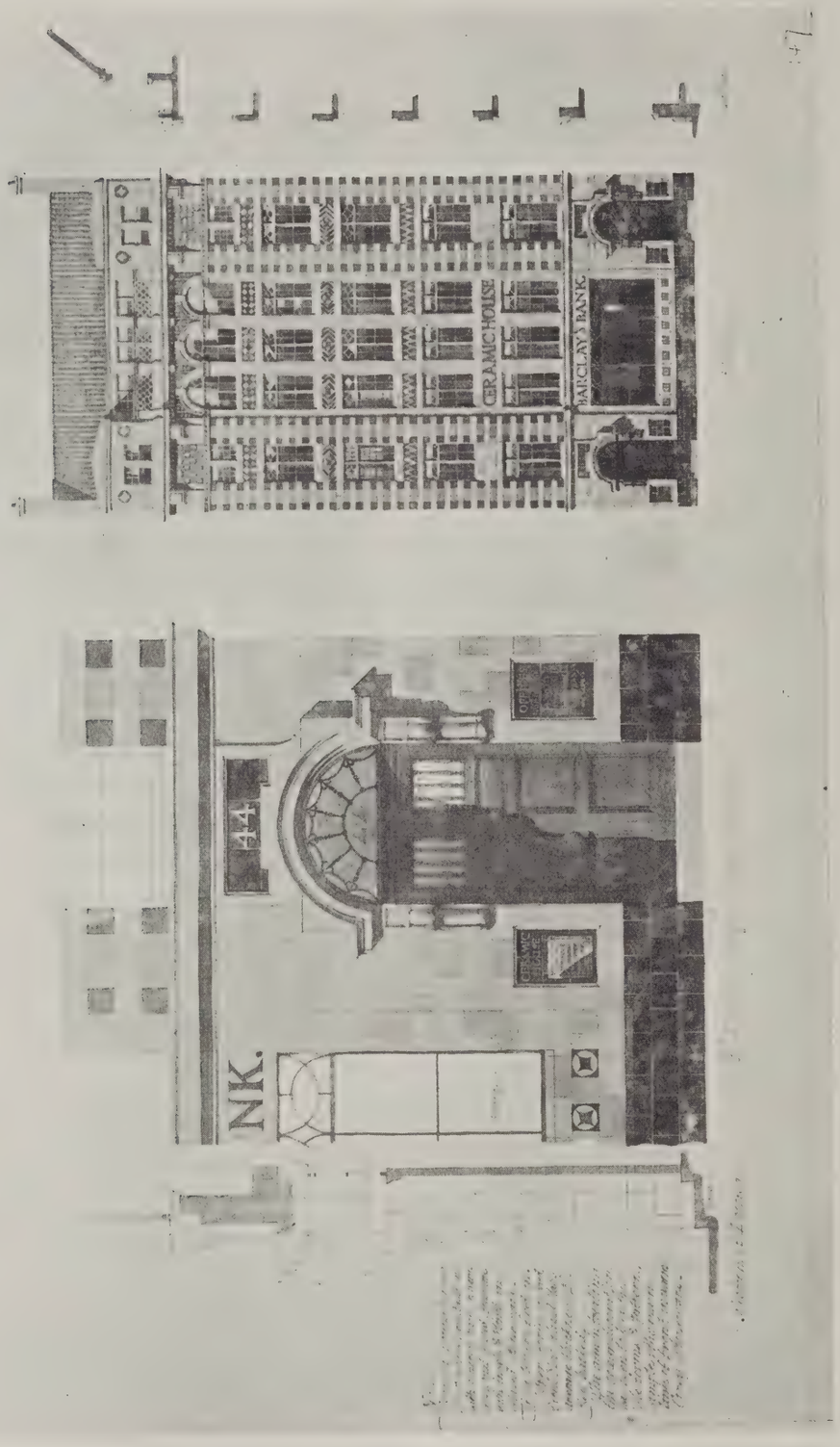
The early Florentine churches have called the tune of Mr. H. F. T. Cooper's design (No. 90) in a variety of coloured marbles, while in an ingenious and well-studied composition Mr. Hugh Mackintosh (No. 120) chooses the late French mediæval work as his model. This design shows a quantity of colour, but generally broken into spots so small that it is doubtful whether, in actuality, they would not tend to combine in a universal grey. It is a difficult matter to strike the balance between masses of colour too large to form a harmony and those too small to hold their own. Mr. Palmer Jones (No. 146) in a characteristic design, emphasizes the importance of black as a foil and combining element for bright colours, while his red and black vertical stripes are admirably set off, and in their turn qualified by the simplicity of the white walls.

In No. 158, by Mr. Frederick J. North, we see a façade which owes its distinction entirely to the sound distribution of strong colour. The treatment of the upper stories, mainly in yellow and blue mosaic and tiles, is striking and dignified, but the effect is somewhat dissipated by the kaleidoscopic appearance of the arches over the entrance doors.

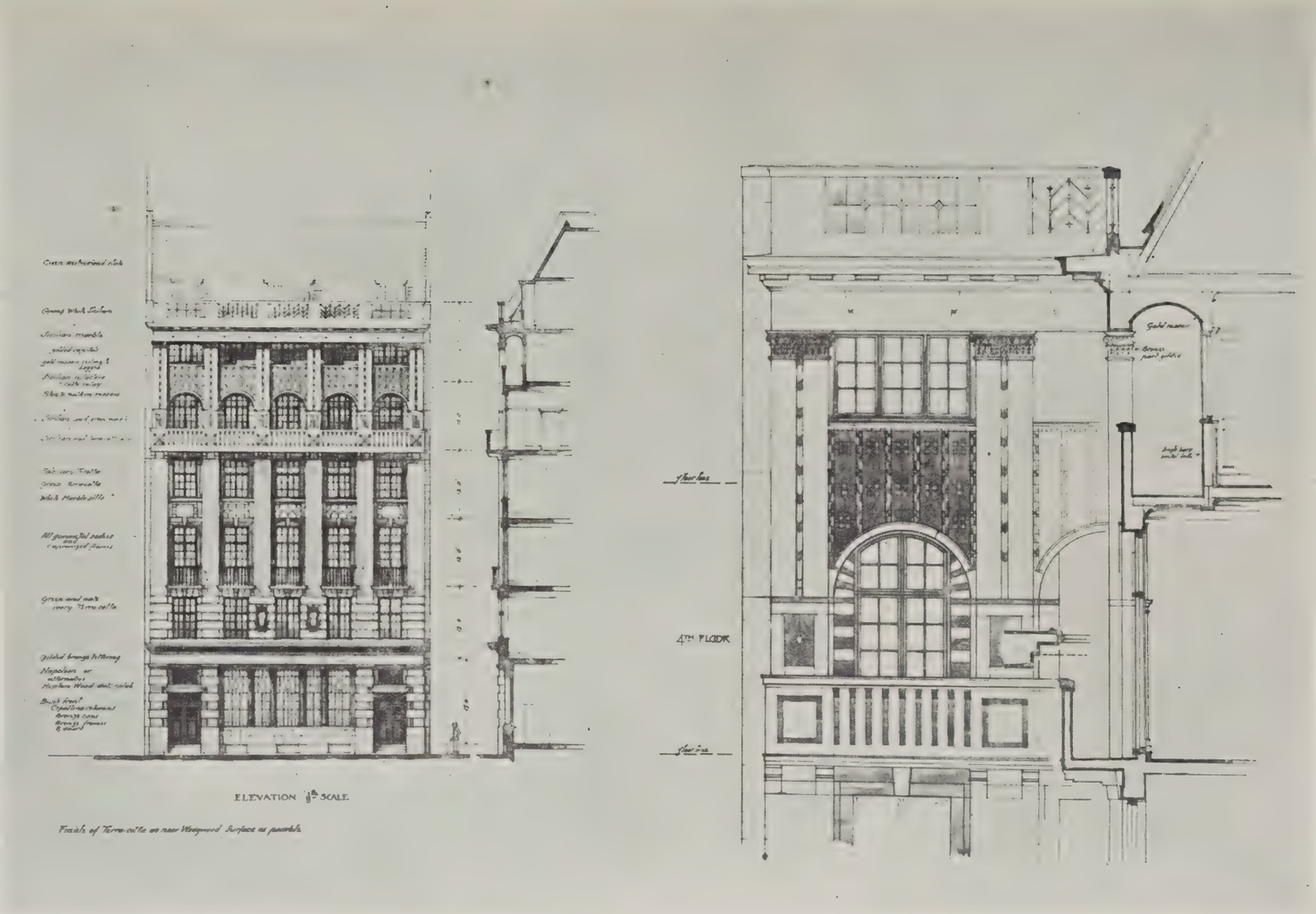
One hundred and seventy designs were submitted, and amongst them there are many, other than those awarded premia or honourably mentioned, which deserve more than a passing attention.

No. 135 shows a bold composition with considerable cohesion between its parts. The light and dark purple, though they make a pleasing contrast with the green, would need strong sunlight to be seen to advantage. The small scale drawing is better than the large, and the lion's heads, in themselves a proper enough yellow, take on an unpleasant greenish tint from their proximity to the blue and purple frieze. Unfortunate reactions of this kind can usually be overcome by mixing with the affected tint a little of its surrounding colour. No. 136 takes its inspiration for design and colour from the Land of the Pharaohs, while No. 113 is a pattern of Greek chastity, presenting in a sensitively handled scheme an arrangement of white, gold, and green, pleasingly contrasted by the blue background of the white Dorian horses in the frieze. But it is unlikely that this design would retain, out of doors, in a London street, the delicate charm it displays on paper.

Nos. 22 and 50 are both interesting as examples of draughtsmanship, though in widely different manners. No. 22, in a free and dashing way, sets out a design of no little merit, but the colour would seem to be largely resident in the washes with which the shadows are indicated. No. 50 is a clean presentation of a dignified façade, though the colour is literally the more conspicuous by its general absence. Indeed, this design raises the question of whether,



R.I.B.A. COLOUR COMPETITION: FIRST PREMIATED DESIGN.
BY ARTHUR E. PEARCE.



R.I B.A. COLOUR COMPETITION: SECOND PREMIATED DESIGN.
BY JOHN S. LEE, A.R.I.B.A.

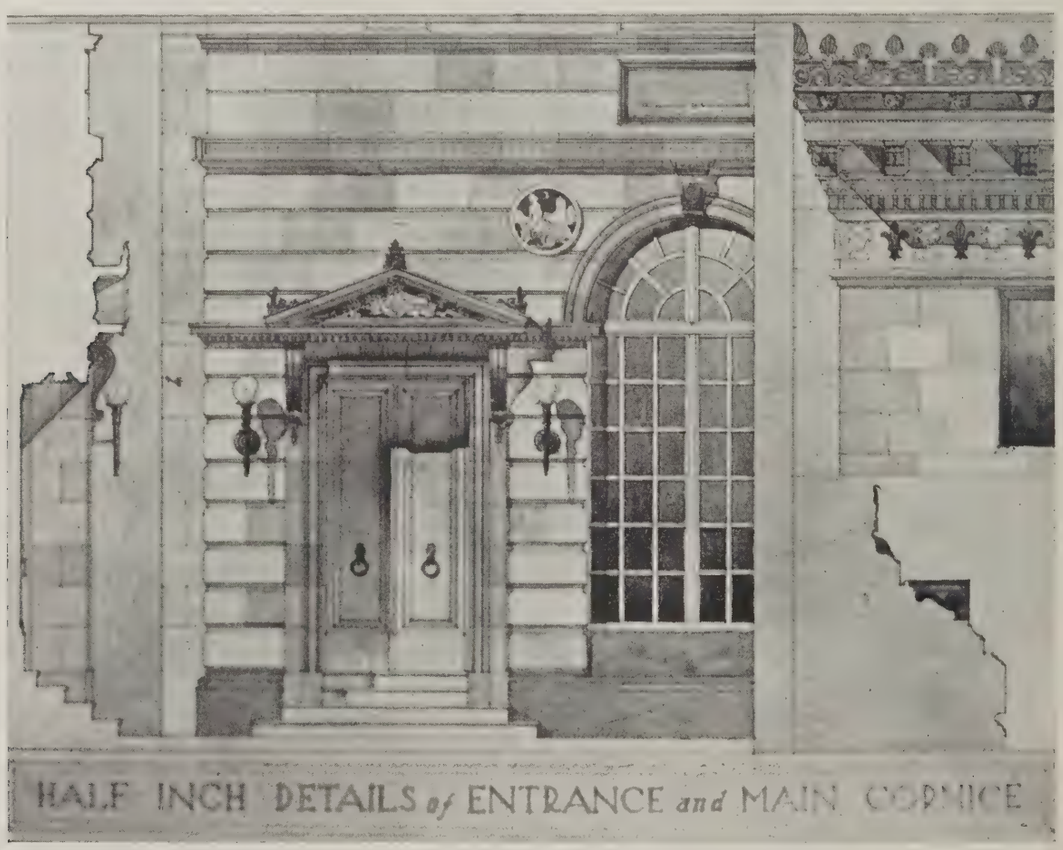
after all, colour on buildings, in this climate, is not perhaps more effective when kept at its full strength, and concentrated at a few points of interest foiled by large areas of white or grey.

The question of the right use of colour on city buildings is one which has been long under debate. We welcome any attempt to find a solution, and we have to thank the anonymous donor of the premia, and the R.I.B.A. for its enterprise, in promoting this competition. If we cannot say that the solution has been found, we have at least, in these designs, much fresh material for speculation. There are here many conceptions which tend to show that the use of colour on a building, as the predominating note in the design, implies that the architecture should take the form which the requirements of the colour dictate. To intrude new ideas of colour decoration on traditional architectural forms would seem as dangerous as the proverbial experiment of putting new wine into old bottles. If, for the sake of a conviction in principles, an extreme case be taken, even a reduction to the absurd—as a St. Paul's Cathedral bedizened in a coat of many colours—it would seem obvious that there is ample evidence of the futility of decoration by colour on forms designed to be complete without it.

An objection which has been made to a general use of colour on street façades is the difficulty of harmonizing a number of schemes, each one differing from its neighbours. The heterogeneous appearance of our streets has already been the subject of some comment, but if the diversity of our buildings were augmented by a variety of colour schemes should we not see confusion worse confounded? But here, the general adoption of colour, by leading to some common manner of design, might itself solve the difficulty it threatened to increase. But, as we said before, nothing is more liable than colour to alteration by changing conditions of light and weather, and we are left wondering if our advent to that "Brighter London" will not be better assisted by a greater brightness in more transient objects than coloured buildings, in things that vanish when grey skies put them out of court, as sun-blinds and summer frocks, the band in the park, and the pleasure-boats on the river; by a greater gaiety in the things that appear, like the spring flowers when the sun shines.

JAMES BURFORD.

THIRD PREMIATED DESIGN.



R.I.B.A. COLOUR COMPETITION: THIRD PREMIATED DESIGN.
BY G. L. OWEN.

Our thanks are due to those gentlemen who spared their time to adjudge the awards, and we trust that the example of an assessment by a jury of at least three members is one which it will be found convenient to follow in subsequent architectural competitions.

The full awards of the assessors (Messrs. Thos. E. Collcutt, Halsey Ricardo, and Gerald Moira) are as follows :—

First Premium (£100) : No. 147, Mr. Arthur E. Pearce, 8 Herondale Avenue, Wandsworth Common, S.W.18.

Second Premium (£50) : No. 93, Mr. John S. Lee, A.R.I.B.A., 2 Bedford Square, W.C.1.

Third Premium (£20) : No. 130, Mr. G. L. Owen, Dock-masters House, King George Dock, Hull.

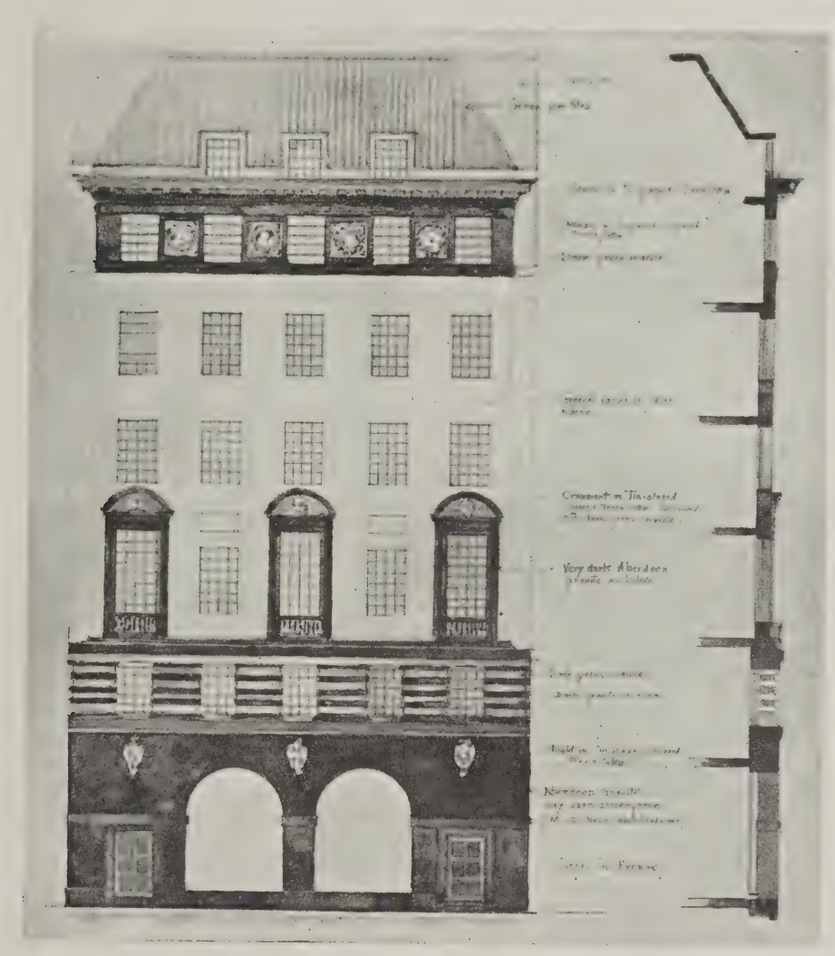
Fourth Premium (£30) : No. 78, Messrs. H. S. Fleming, A.R.I.B.A., and W. J. Kieffer, 83 Pall Mall, S.W.1.

No. 146, Mr. W. J. Palmer Jones, 11 Buckingham Street, Adelphi, W.C.2.

No. 158, Mr. Frederick J. Horth, A.R.I.B.A., 19 Albany Street, Hull.

In the suggestions and stipulations issued to competitors it was laid down that colour must be suggested by the use of permanent material only. Designs in oil paint, fresco, sgraffito, and so on, would not be admissible.

With regard to the material competitors might suggest in their designs, it was observed that a scheme for facing concrete blocks with various materials, such as marble, terra cotta, mosaic, or copper plates, had been devised and successfully produced. It had been found that the cost of facing a building with either of these materials would be at least 25 per cent. cheaper than an ordinary stone facing. Competitors, however, were not invited to submit estimates.



R.I.B.A. COLOUR COMPETITION: FOURTH PREMIATED DESIGN.
BY H. S. FLEMING, A.R.I.B.A., AND W. J. KIEFFER.

Honourable Mention.

No. 32, Mr. Elfric H. Smith, 82 Broomwood Road, lapham Common, S.W.11.

No. 61, Mr. Frederick Barber, "Carisbrooke," Marl-orough Road, South Woodford.

No. 84, Mr. Harry Simeon, 83 West Side, Clapham ommon, S.W.4.

No. 86, Mr. H. F. Billimoria, School of Architecture, niversity of Liverpool.

No. 90, Mr. H. F. T. Cooper, "The Two Gables," Box idge Avenue, Purley, Surrey.

No. 120, Mr. Hugh Mackintosh, 1 Imperial Buildings, ast Croydon.

"The terra-cotta facing (it was remarked) can be made in any colour, and not highly glazed. It is possible to obtain this material with a gloss like that of old Wedgwood or similar ware. The maximum size (at present attained) is 21 in. by 15 in., in columns up to 24 in. diameter. It should be borne in mind that there might be slight irregularities on the face and variety in the tone of colour. This would give a play of light which some designers may think desirable."

Of course, marble facing could be of much larger dimensions. Competitors were to suggest only such marbles as are known to withstand the deleterious effects of the London atmosphere. Stone or granite could be used at the discretion of the competitor.

Owing to absence abroad, Sir Edwin Lutyens and Mr. William Walcot were unable to act on the jury.

Mr. J. Alfred Gotch on The First Half-century of the R.I.B.A.

It is strange that man in resolving the circumstance of life into three parts—the past, the present, and the future—should have lost sight of the fact that the past is in the present, and that the present is already in the past, while the future is now here. Some of us live on a past and in the future, while others, less fortunate, live in the past and on the future. Generally the present has to take care of itself.

There are those who regard the past lying beyond the orbit of their own experience as something complete within itself; with strange people different to ourselves, dressed more beautifully, acting more graciously, and doing things which are either beneath our notice or beyond our scope. We have divided humanity of the past into periods, and as they fall within those periods their actions are set within limits. We rarely if ever give them the credit of thinking of the eternal consequence of their actions, because few of us can take the trouble of following the forces of those actions. If we could we would find that they had got as far as to-day.

One of the grandest things that was ever written or sung by men is that song of the American Civil War—

> John Brown's body lies a-mould'ring in the grave,
> But his soul goes marching on.

Everything in life is either in a state of dissolution or evolution. This is a physical fact; it is also a physical fact that energy is never lost, but that, like John Brown's soul, it "goes marching on." There are two pleasures in looking back into the past; one is comparison, and the other, and by far the more important, is the sense of continuity.

There is a greater pleasure than looking into one's own past, and that is looking into other people's. It comes with a sense of gratification to find that they were very much like ourselves, beset with the same difficulties, just as foolish, just as noble, and, if our biographer is truthful, just as bad. History is eternally repeating itself, and Mr. Gotch, in his delightful paper, gives us more than one historical parallel with our own times.

Mr. Gotch is an easy and a fluent speaker; and although one knew that the material for this paper must have cost him hours and hours of patient research in the archives of the R.I.B.A., he kept his audience free from the weariness which he himself must have felt in wandering through volume after volume of the Institute records.

He said: The eloquent prelude to the tribute of praise paid to departed worthies, which is to be found in the 44th chapter of Ecclesiasticus, is also an apt prelude to the story of the early years of the Royal Institute. It need not be quoted in its entirety, a few phrases will suffice:—

"Let us now praise famous men, and our fathers that begat us. . . . Leaders of the people by their counsels, and by their knowledge of learning meet for the people, wise and eloquent in their instructions. . . . Rich men furnished with ability, living peaceably in their habitations."

The aptness is obvious. We can all agree that architects may become famous, we cannot deny that our fathers begat us, we can concede that some of us become leaders by our counsels, and some, although perhaps fewer, by a knowledge of learning; we can easily believe that wisdom is apparent in us and eloquence latent, but "rich men furnished with ability" gives us pause. There is no difficulty about the ability, but a "rich architect" would strike most of us as a contradiction in terms. And yet there were, in the early days of the Institute, architects rich enough and generous enough and sufficiently devoted to its interests to endow it handsomely.

The picture of the Institute in its earliest times is one in which the foreground is filled with men of ability, some of them famous and many of them with a wide knowledge of learning, while the background is dimly peopled with others neither rich nor furnished with much ability and living peaceably in their habitations unstirred by the eloquence or wisdom of their more energetic brethren.

The Institute was not the first association of architects who banded themselves together for mutual support and instruction, but it was the most enterprising and the most enduring.

Already in the year 1806 the London Architectural Society had been founded, with rules of almost Draconian severity. Another society was instituted in 1831, called the Architectural Society, of which the ultimate ambition was "to form a British School of Architecture, with the advantage of a library, museum, professorships, and periodical exhibitions." For some reason this society did not satisfy architects of the time, for in 1834 a meeting was held at the Freemasons' Tavern to form another society, "for the study of Architecture and Architectural Topography." The promoters, however, could not agree upon either the objects to be aimed at, or the conditions of membership, so a few of them decided to hold another meeting at another hotel, and a committee was appointed which included such names as P. F. Robinson, Kendall, Goldicutt, Fowler, Donaldson, and Noble. The business of the committee was to draw up a scheme for the formation of an institution to uphold the character and improve the attainments of architects. Their labours must have been attended with success, for at a subsequent meeting Messrs. Barry, Basevi, Decimus Burton, Cresy, J. Gwilt, Hardwick, Kay, Lee, Sir J. Rennie, Papworth, Robinson, Seward, and G. Taylor were elected as original members.

By the end of 1834 the new society, under the style of the "Institute of British Architects," was so far constituted as to have a council and a number of ordinary members. This is the earliest written record concerning the Institute that has been preserved in its archives. The writer is the accomplished Professor Donaldson, the only one of the founders who was alive at the end of the first fifty years of its existence, and one who during the whole of that period took an active part in its affairs, and, indeed, did probably more than any other person to mould its policy and direct its activities. The headquarters of the infant Institute were then at 43 King Street, Covent Garden. The suggestion of taking the adjoining room indicates an actual or prospective increase of members, and the other matter for consideration, the election of a president, was of first-rate importance, for it resulted in that office being filled by Earl de Grey, whose influence did much to raise the new society from comparative obscurity to the position of being the leading body of architects in the kingdom and, eventually, in the Empire.

It is clear that the year 1834 saw the inception of the Institute and its definite beginning, but it took nearly a twelvemonth to become fully equipped, and a notice to its members, signed by Donaldson and Goldicutt, marks its first meeting as a fully constituted body. At this meeting the president, Earl de Grey, stated the objects of the new Institution, and pointed out the advantages which architecture, as a national art, would derive from its foundation.

The president's opening remarks were followed by an address by the senior secretary, Mr. Donaldson. He announced that already eighty members had been enrolled, that communication had been established with several foreign academies, and that the nucleus of an excellent library had been formed. He proceeded to express a hope

that prizes would be offered to young architects for original designs and for measured drawings of old buildings, and that facilities would be afforded to students for foreign travel. He also mentioned the opportunities which would be given at the ordinary meetings of the Institute for discussing matters of scientific and antiquarian interest. In fact, he foreshadowed at that opening meeting many of the principal objects which the Institute has made its own.

The ambitions of its founders were indeed wide: the Institute was to have international relations; in the earlier records appear the names of more foreigners seeking honorary membership than of natives seeking ordinary membership. Already in the month succeeding the inaugural meeting, Donaldson, one of the secretaries, submitted a "Paper of Queries on all subjects of Architectural Investigation. Drawn up by the authority of the Council, for the purpose of distribution throughout the world." Matters of perhaps less portentous moment were not neglected, and we find subjects discussed which would be of interest to ourselves. At the last meeting of the session of 1835 Mr. Papworth, vice-president, read a paper "On the benefit resulting to the Manufactures of a Country, from a well-directed cultivation of Architecture and of the Art of ornamental design, as an essential portion of its study." Might we not ask, with some trepidation, how far such a paper might now be useful, after a lapse of nearly ninety years? At the same meeting Mr. Britton, whose books are still our own delight, offered "some observations upon the style of domestic architecture prevalent in England from the time of Edward IV to that of James I."

Another paper, read in the following session, has an appeal to me which I cannot resist. It was a "Paper by George Gutch, Fellow, containing an account of the Original Drawings and Designs by Inigo Jones, Sir Christopher Wren, and James Gibbs, Architects, preserved at Oxford." Unfortunately there were no TRANSACTIONS published in those early years of the Institute, nor were there any architectural journals in existence, and so these valuable contributions are not available for reference.

Hitherto the notices of meetings had either been written or lithographed, but on May 3, 1836, they assumed the dignity of print, and the circular of that date announces that at the annual general meeting on Monday last the officers elected were: president, Earl de Grey; vice-presidents, Charles Barry, John B. Papworth, and P. F. Robinson; secretaries, T. L. Donaldson and Charles Fowler; together with seven members of Council.

The Institute was now well established. The first volume of its TRANSACTIONS was published in this year, the cover adorned with its well-known device or seal, the design of which has since been modified: I have found no mention of the original designer. It proceeded in November of the same year, 1836, to secure its status still further by applying for a Charter of Incorpoartion. On the seventh of that month the necessary resolution was passed at a special general meeting, and with almost incredible speed its terms were formulated, by-laws were drawn up, and on February 6 following His Majesty's Charter was laid on the table, the date of its grant being January 11.

This Charter remained in force during the whole of the period now under review; it was supplemented a year or two after the close of that period. The by-laws first adopted form the foundation of those by which we are now governed, and no greater tribute than these facts could be paid to the wisdom and foresight of our founders.

The Institute of British Architects was now an important and well-recognized body, although it was not yet "Royal." The young queen became its patroness; its president was Earl de Grey, "an amateur of considerable cultivation and artistic taste," and a person of great influence in high quarters; most important of all, it included in its membership nearly all the leading architects of the time with the exception of the Royal Academicians.

The most important event during 1837 (apart from the Charter) was the transfer of the Institute to better rooms, an indication of its growth. The noble president, accompanied by the council, inspected several suites, and eventually that at 16 Lower Grosvenor Street, near Grosvenor Square, was taken; and there the headquarters remained for twenty-two years, until the removal to our present premises was made in 1859.

One of the outstanding events of this early period was a visit, in the year 1843, of our patron the Prince Consort, or Prince Albert as he was then styled, to a meeting of the Institute. In was on April 3, and the occasion was the distribution of prizes.

But the interest of Royalty in the affairs of the Institute was awakened again three years later, no doubt through the good offices of Earl de Grey, and on April 27, 1846, the gift of a Royal Gold Medal was announced. The medal was intended as an encouragement to young architects by a competition in design, and the subject set for the first competition, which was held in 1847, was the very suitable and practical one of premises for the Institute itself. Eleven designs were submitted, but they missed the mark so entirely, they were, most of them, so grandiose and expensive—in short, they so widely disregarded the conditions imposed, that the medal was not awarded.

This fiasco sealed the fate of the junior members of the profession in regard to the medal, and it was decided to award it in future, not to the immature work of the young, but in recognition of the actual achievements of the older men. The royal donor agreed to the change, and accordingly, in the following year, 1848, the first recipient of the Royal Gold Medal was Charles Robert Cockerell.

Mr. Beresford Hope left his mark upon the Institute, for it was during his term of office, and in consequence of his influence, that the epithet "Royal" was added to our title, and since the year 1866 we have been known as the Royal Institute of British Architects.

Such is the history in outline of the first half-century of the Institute. It is but a sketch, a sort of impressionist picture, for to fill in all the details would take years of labour, and reams of paper; and when the work was finished it would tax the patience of the most devoted student to master it. But enough has been said to show the ability of those who founded it and fostered it and entered into the fullness of its success. They have left us a noble heritage, a heritage of practical knowledge, of deep learning, and of high endeavour. It is a heritage we must not waste, nor shall we. Rather will it urge us to increase it, and by facing modern conditions in a modern spirit leave to our children more than we received from our fathers. Yet while we grapple with problems of great practical interest, let us not forget the traditions which cling to us, traditions of learning, of high-mindedness, of gentle manners. So shall we worthily emulate those famous men, our founders, leaders of the people, wise and eloquent in their instructions.

Discussion

The most important fact about the discussion was that it was opened by Mr. W. B. Worthington, President of the Institution of Civil Engineers. His presence was a great courtesy which one felt that the whole profession would appreciate, and which augured well for the relations between the two great professions. Referring to Mr. Gotch's remark that eloquence was latent in all of them, he said that eloquence was very latent in him. Mr. Gotch told them that in 1835 (seventeen years after the foundation of the Institution of Civil Engineers) the Institute of Architects was the scene of a pleasant meeting at which the then President of the Institution of Civil Engineers was present. It was interesting to reflect on those historical precedents, more interesting to note the pleasant relations which even then existed between the two professions, and most important of all, to feel that that friendship between them would continue. Like the R.I.B.A. the Institution of Civil Engineers included many distinguished names in its long list of presidents. As in their own professional body the length of the presidential office varied in its early years. Telford was president for fifteen years; James Walker for ten

years, and Sir John Rennie for three years. Since then the presidents had variously remained in office for two years or only one. One year was now the proper term of office, but upon persuasion the president may remain for two. Clarke Hawkesley had done much in the past to maintain those happy relations between architects and engineers; he believed in collaboration between the professions, and he did much in keeping the buildings of engineers inoffensive to architects. Hawkesley was well known for the good designs of his waterworks' buildings. A pleasant instance of collaboration was when Sir William Tite was associated with Errington in the building of Lancashire Castle Station. The result was quite in keeping with its surroundings.

Mr. John Slater, in seconding the vote of thanks, spoke of how the succeeding years had wrought so much more change than the first fifty years of the Institute. Each new occasion brought new ideas, and time made old things seem strange. It was always interesting to speculate on the thought of if the men who were gone could come back —suppose, for instance, the first paid secretary, Mr. Eastlake, could come back and note the volume of work unde taken by the staff now. Mr. Slater said that he thought that he was the only member of the first half-century taking part in the work of the Institute. He could remember so well the room upstairs where they used to congregate. That room was for him peopled with ghosts. He could remember Donaldson, and Sir William Tite in the chair. There was a crowded meeting in 1880 to listen to a paper on "The Relation of Sanitary Science to Architecture." The discussion was so great that the meeting had to be adjourned. There was an architect of that time of some standing who was quite shocked on being asked to advise as to some faulty drains in one of his houses.

In 1881 Mr. Slater himself gave a memorable paper on the then new electric lighting; but the engine was erratic, and the light so erratic that he had to have a man keeping the carbon in position. One of the most memorable pages in the history of the Institute was the contest between Street and Horace Jones for the presidency. Street was elected by two votes. There was Professor Kerr, who was the most able speaker he had heard upstairs, and whose book "The New Leaf Discourses" was a brilliant commentary on things architectural and otherwise. There was a picture painted by Phené Spiers called "An excitement at the R.I.B.A."; the library had not a photograph of this picture, and Mr. Slater thereupon kindly presented to the Institute a copy that he had brought with him to the meeting, asking that it might be framed and set up somewhere. Mr. Slater concluded by saying that those men had bequeathed a goodly heritage, and that it was in the hands of the younger men to make or to mar. It looked as if they were approaching a moment of considerable difficulty, but he was sure that they would approach these present-day problems in that spirit of unselfishness and truth which had characterized our forerunners — the spirit that "None is for the party, and all are for the State."

Mr. William Woodward said that he thought he knew a good deal about the R.I.B.A., but Mr. Gotch had told him many things he didn't know; 1879 was an important year in the history of the R.I.B.A., for in that year Mr. Slater joined the R.I.B.A., so did Mr. Collcutt, Mr. Aitken Bury also, and—Mr. William Woodward. In his early years an Associate was not allowed to vote, so he had the pleasure of being allowed to attend the meetings, he was even allowed to speak, but not to vote on any matter. There were some good speakers in those days. Professor Kerr was the best among them. Mr. Woodward had seen and heard the presidents of the Institute from Sir William Tite up to the present Mr. Paul Waterhouse. Mr. John Slater had mentioned many names which brought back memories of men he had known and honoured.

Mr. Maurice B. Adams said that he could well remember the scene on the presentation of the Gold Medal by Horace Jones to a German individual, and of how the proud recipient threw his arms round the neck of Horace Jones and kissed him. It said a great deal for the good manners of the Institute that not a titter could be heard from the meeting. Mr. Adams spoke of the great need for a new catalogue in the library. He said that since 1888, when the Brandon Donation Catalogue had been published, there had been no new complete catalogue brought out. The supplements to that catalogue which had been made up from time to time were of little use, for they were easily lost, and it was almost impossible to keep them together as one whole thing; besides which, few members had copies of the catalogue itself. Since they had such a great collection of architectural books, the full value of the excellent library was lost without a convenient and handy book of reference to its valuable contents. The whole thing was most unsatisfactory. Mr. Adams appealed to the Council that they would make a grant towards the publication of a catalogue.

Mr. Paul Waterhouse said that his period just cleared the first fifty years of the R.I.B.A., and he dwelt for a moment on the engaging thought of one many years hence who would read a paper on the funny people of 1922.

F. E. T.

"Brightening" London—and New York

OF the many proposed methods of "brightening London," there are few, if any, that do not "make the judicious grieve," not to say shudder. In New York there would seem to be even stronger grounds for apprehending the very worst. "The Times" New York correspondent assumes that "the last word in bright ideas on the part of a publicity expert is furnished by a letter received by the Park Commissioner of New York City from the representative of a firm of motor-car manufacturers." This letter is so deliciously artless that "The Times" correspondent cannot refrain from printing it in full. It begins auspiciously: "The artistic wave which is sweeping over the city is having precisely the same effect on its business men as similar artistic development had upon the population of ancient Greece. Every public-spirited citizen is now striving to make New York beautiful." With which object "an automobile concern of high reputation" wants the use of the west side of the Metropolitan Museum of Art on which to advertise their latest car. Not vulgarly or blatantly, as one who is *not* "striving to make New York beautiful." Quite the contrary. "With commendable civic interest, my client proposes to beautify the building by painting thereon in immense size a suitable woodland scene and to delineate an attractive roadway passing through woodland glens, with, if the city wishes, a little river in the background." "A motor-car will, of course, figure in the roadway," and to avert any scandalous suspicion that the city was lending itself to advertising a cheap one, its trade name will be painted on its side in large letters plain for all to behold; for in such delicate questions of taste it is well to leave nothing to chance. With the very praiseworthy object of "educating the youth of the city," one of the occupants of the car "should be a prominent city official." We do not understand this as a joke—at least, not as an intentional joke, ill-conceived and over-elaborated. It was probably advanced as "a sound business proposition," and as such is valuable as illustrating the monstrous lengths to which this city-brightening craze may lead unless it is kept in check.

Swanpool Garden Suburb, Lincoln

THE Swanpool Public Utility Society was formed early in 1919 to attempt to overcome the serious housing shortage in the City of Lincoln. A piece of land of about 350 acres was obtained in close proximity to, but on the windward side of, several large engineering works, and this was laid out as a garden suburb. It was decided to build by direct labour, and from first to last this proved very satisfactory. The houses cost no more than others that were being erected in different parts of the country at the same time, and, generally speaking, they were larger and better.

Building operations were commenced in April 1919, and continued till September 1920. During this time 113 houses were built, and some half a mile or so of road and over a mile of sewers were laid. It had been the intention to build about 2,000 houses with shops and semi-public buildings, but owing to the serious difficulties which beset the engineering works in the city, in which most of the workers are engaged, the scheme could not be completed.

The experiment served to prove that a public utility society cannot be run successfully under the present scheme of Government financial aid for a purely working-class community. As is well known the Government lends only 75 per cent. of the approved cost of building and development, plus 75 per cent. of the cost of the land actually being used for building purposes (viz., about five acres or less at a time). This society, therefore, found itself saddled with a dead weight of some 340 acres of land upon which it could raise no loan. The society was obliged to hold this land, otherwise a complete scheme of development for the area was impossible. It was also found that Government loans were paid after the work was done, and this necessitated a further large working capital for building operations.

The public utility societies which have survived will be found to be those in which the tenants are in a position to invest at least one quarter of the cost of the house as soon as the building operations are commenced. With the capital thus obtained, and the little outside money that is forthcoming, they can, with great care and difficulty, survive until the Government loans commence. At Swanpool prospective tenants were asked to invest only £5, whereas societies now insist on an investment of from £200 to £450, consequently catering for a totally different class of tenant. It is hoped that one day it will be possible to revive Swanpool on these terms.

The layout of the architects followed simple and direct lines. The site being quite flat no contours had to be

(*Continued on page* 758.)

SWANPOOL GARDEN SUBURB: DOORWAY AND WINDOW DETAIL AND PAIR OF HOUSES
HENNELL AND JAMES, ARCHITECTS (LATE THOMPSON, HENNELL, AND JAMES).

SWANPOOL GARDEN SUBURB: SOME GENERAL VIEWS.
HENNELL AND JAMES, ARCHITECTS (LATE THOMPSON, HENNELL, AND JAMES).

Modern Domestic Architecture: 38.—Cottages at Swanpool Garden Suburb, Lincoln

Hennell and James, Architects (late Thompson, Hennell, and James)

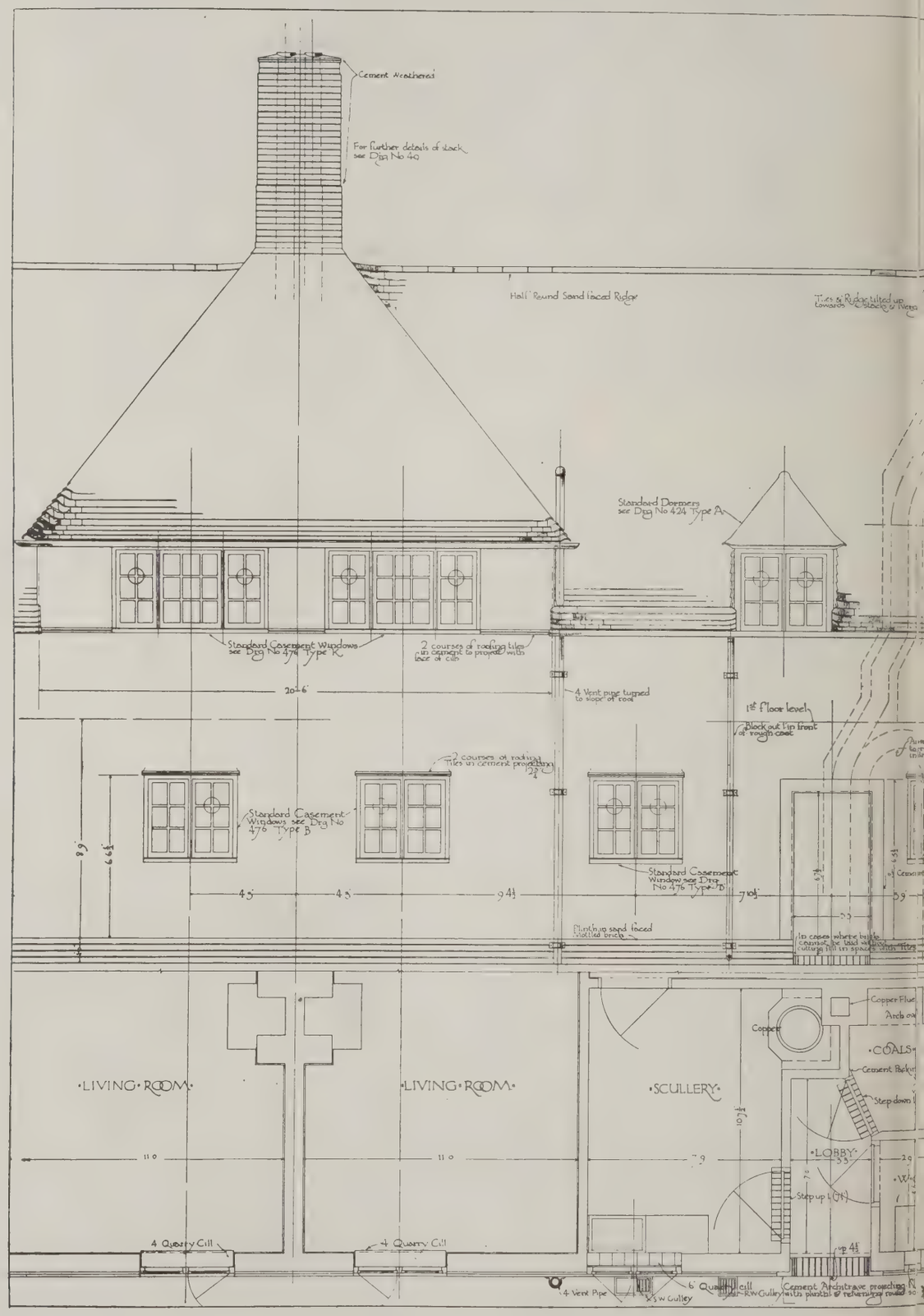
The site of the Garden Suburb is flat, so that the architects had no conditions to dictate the lay-out of the scheme, beyond the fact that there was a road with an avenue of elm trees already existing. Also about three miles away Lincoln Cathedral stands on a hill. This makes a magnificent focal point. The lay-out of Swanpool was published as a double plate in the JOURNAL of July 16, 1919.

SWANPOOL GARDEN SUBURB: CENTRE PORTION OF A GROUP OF HOUSES, AND DETAIL OF A DOORWAY.

HENNELL AND JAMES, ARCHITECTS
(LATE THOMPSON, HENNELL, AND JAMES).

Architects' Working Drawings. 55.—A Block

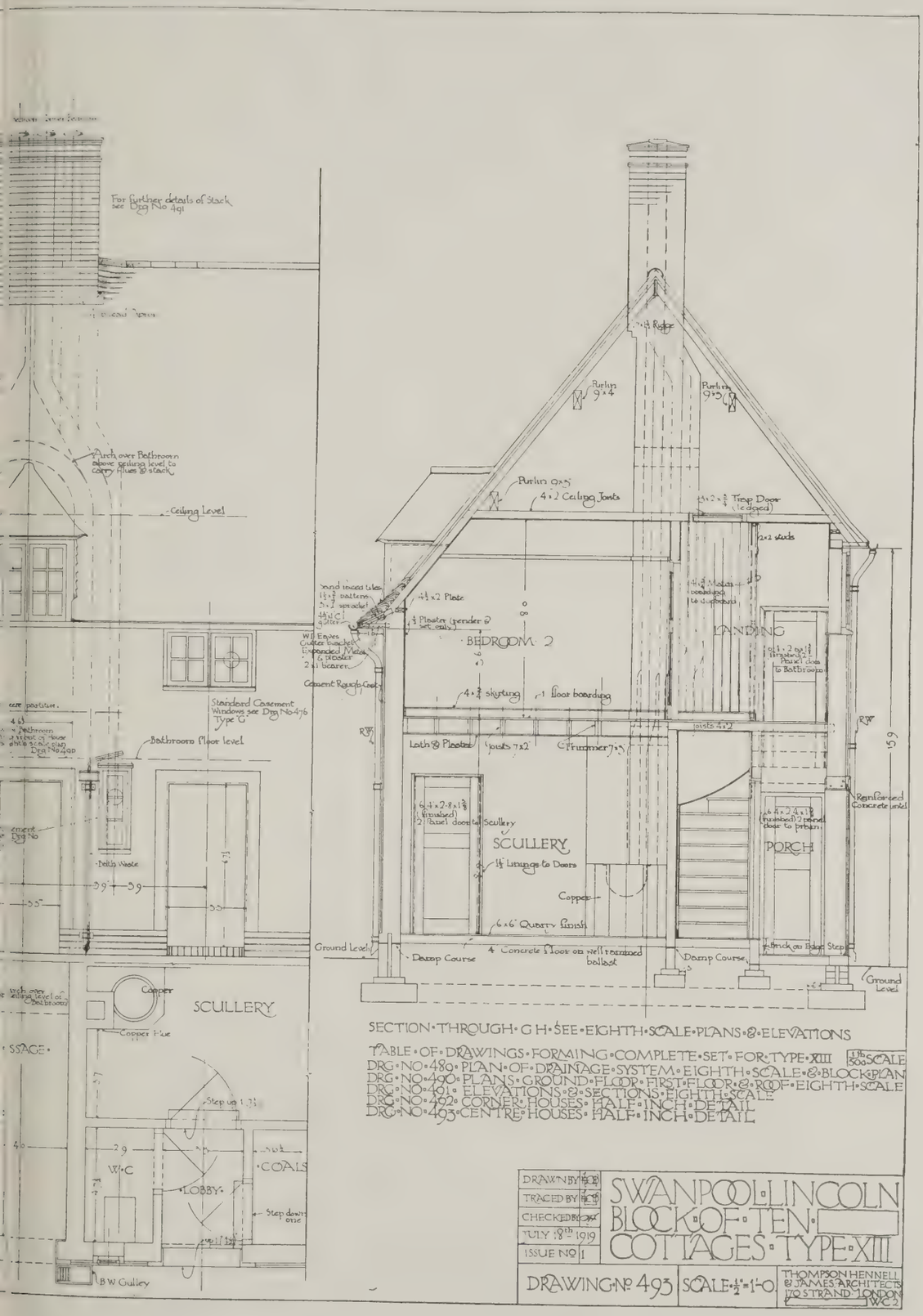
Hennell and James, Architect



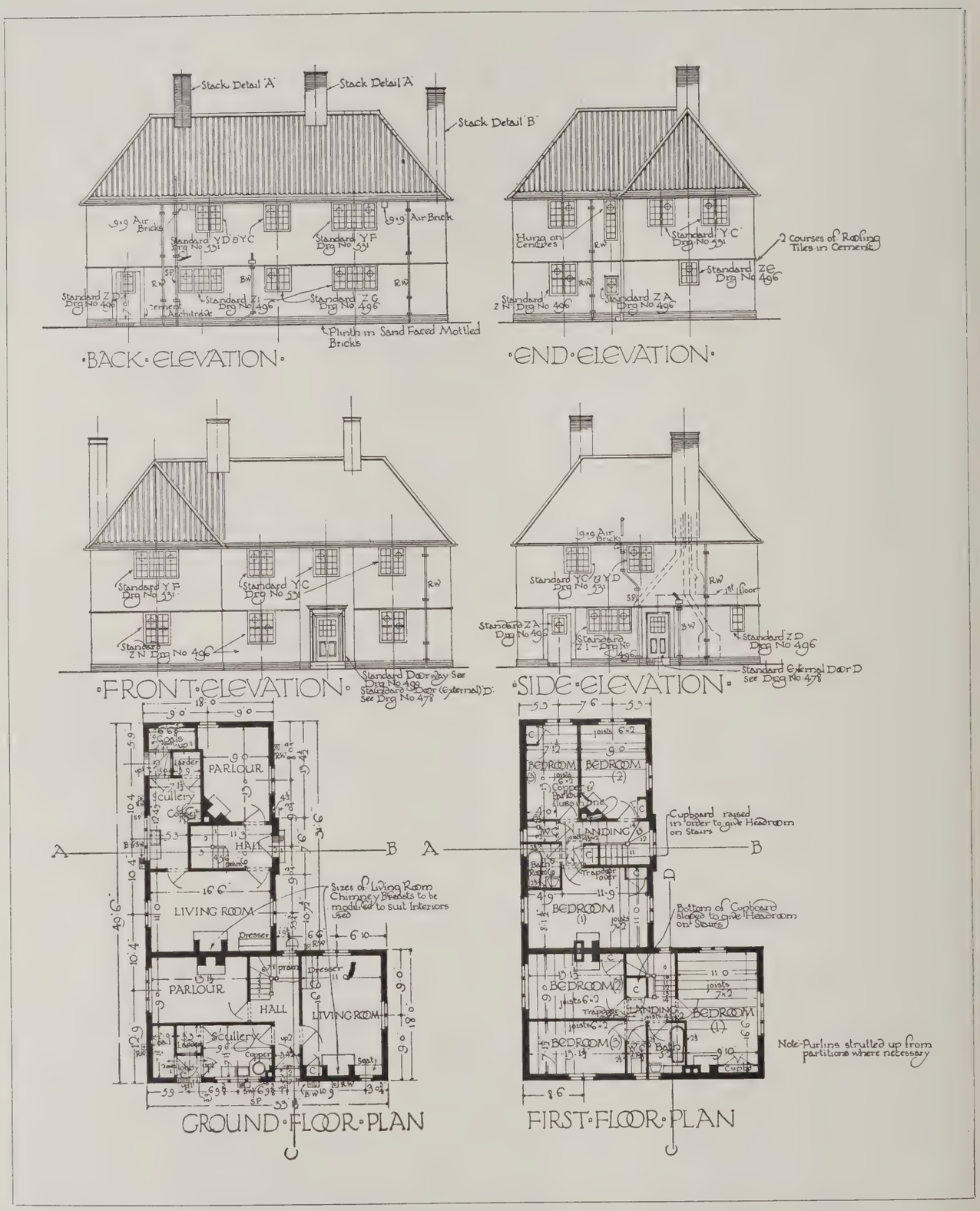
Between April 1919 and September 1920, 113 houses were built at Swanpool, and a mile of sewers and half
rough-cast. The architects cut out all ornament on the grounds of efficiency and economy; but where deta
of sand-faced tiles with a pitch of 52°. All t

]en Cottages, Swanpool Garden Suburb, Lincoln

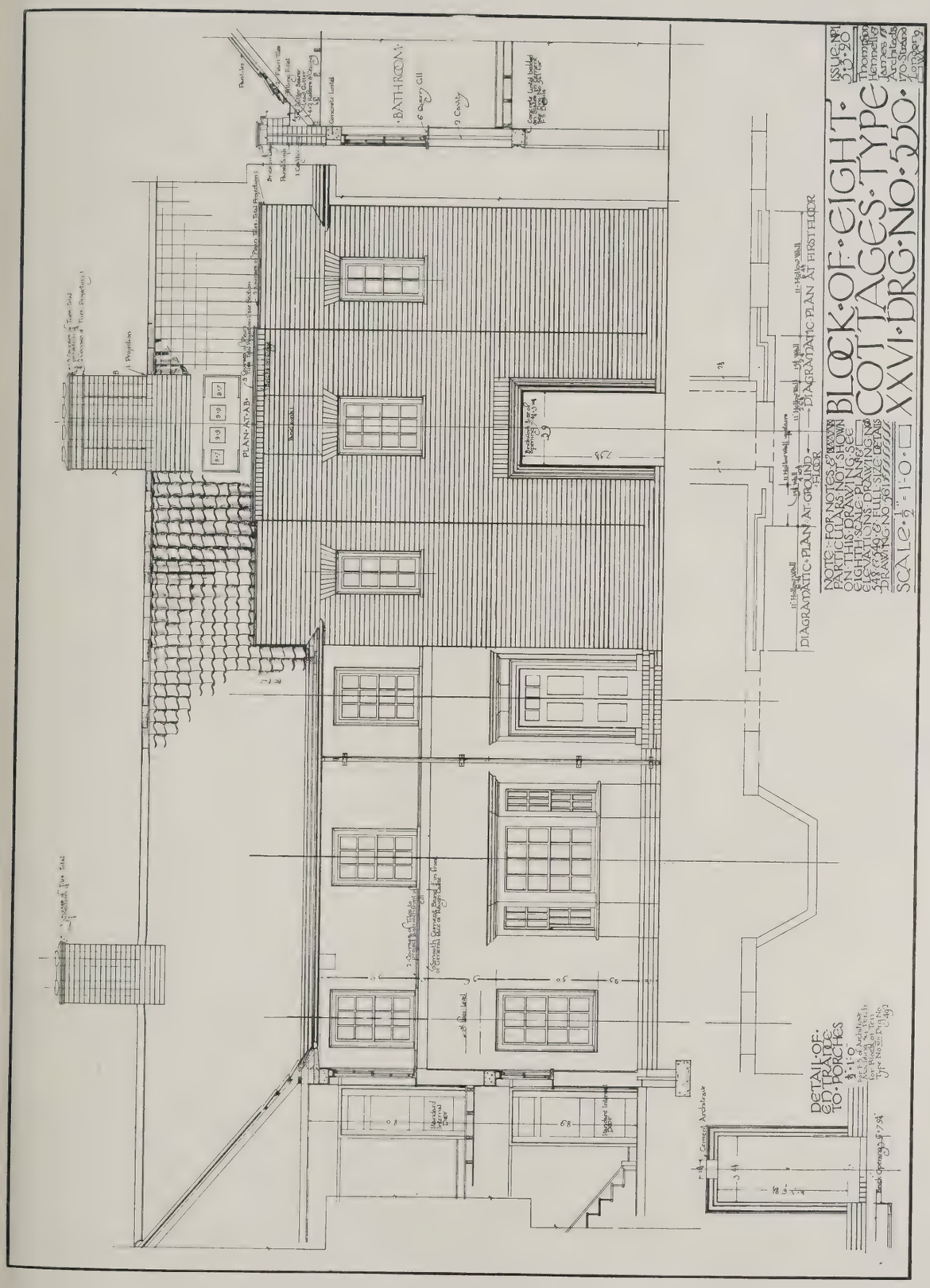
(Thompson, Hennell, and James)



]oad were laid. Facing bricks being unobtainable, Fletton bricks were used in their place, and covered with]ole, as in the doorways, windows, and chimney-caps, it was most carefully studied. The houses have roofs]have a standardized pane size of 7½ × 10½ in.



SWANPOOL GARDEN SUBURB: PAIR OF COTTAGES FOR WEST OR SOUTH ASPECT.
HENNELL AND JAMES, ARCHITECTS (LATE THOMPSON, HENNELL AND JAMES).



SWANPOOL GARDEN SUBURB: DETAIL OF BLOCK OF EIGHT COTTAGES.
HENNELL AND JAMES, ARCHITECTS. (LATE THOMPSON, HENNELL, AND JAMES).

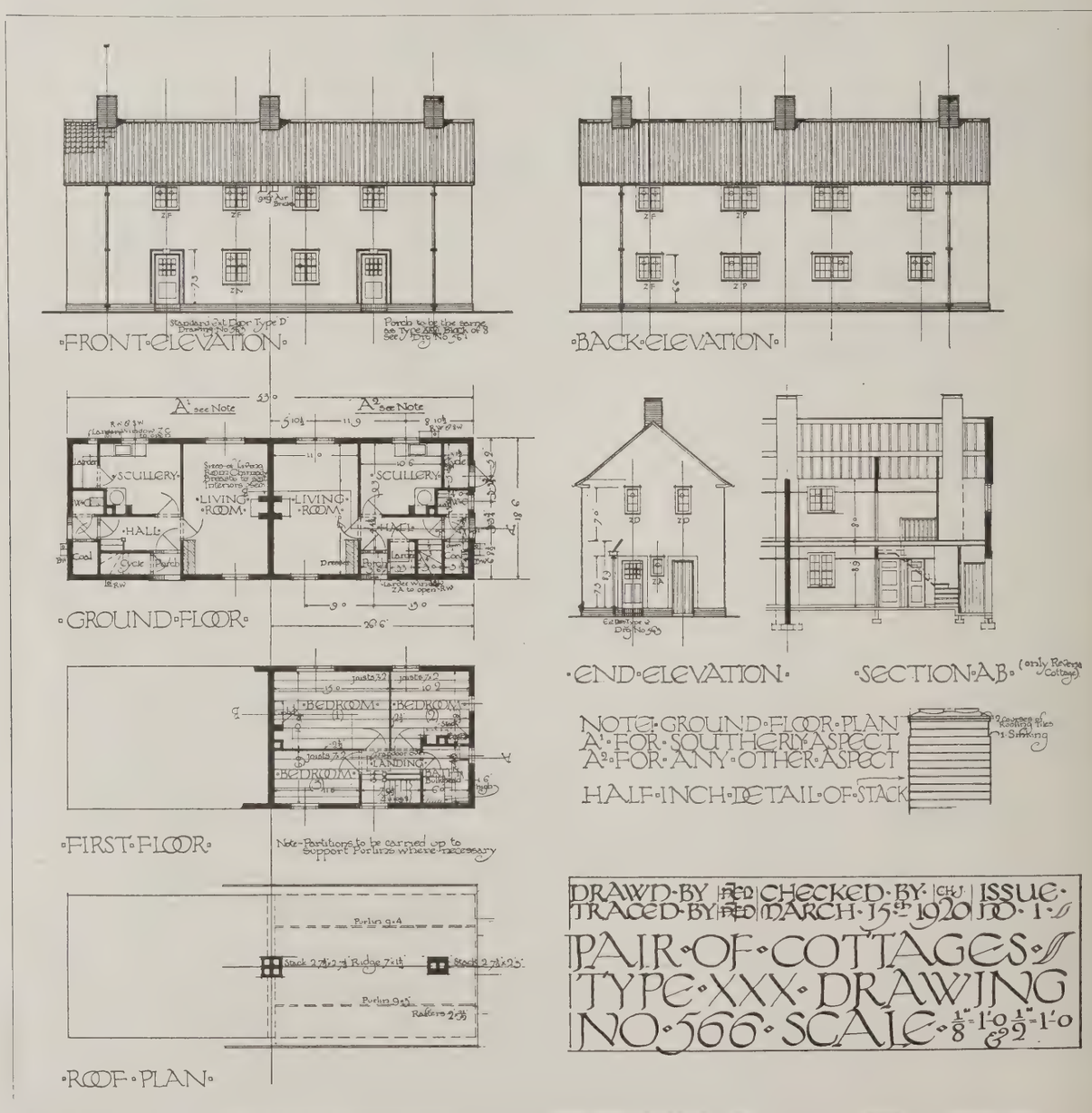
studied, and the feature that dominated the whole area was the magnificent cathedral on a hill about three miles away, in the direction of which the main roads tended. Shops were grouped in two or three places near the main entrances to the suburb, and a "place" or square occupied a central position round which semi-public buildings were to have been placed.

The architects had the good fortune to be able to commence building on a made road, with a charming avenue of elm trees, which prevented the houses from looking too bare even from the first. Facing bricks being unobtainable in the large quantities required, and their price being also prohibitive, Fletton bricks had to be used. These were covered with rough-cast, which was kept as smooth as possible. These materials dictated the design of the earlier groups, which have roofs with a pitch of 52 deg. and covered with sand-faced tiles. The groups follow more or less the English cottage tradition. It was intended, as facing bricks became less costly and scarce, to merge into a simpler style with sash windows and flatter roofs. Owing to the closing down of the scheme it was never possible to do this. Attempts were made to introduce interest into door surrounds, but otherwise no ornament was possible.

Two quadrangles were built, one consisting of ten and another of fourteen houses, while another of eight was about to begin when the work came to an end. These were found to be quite popular and much more interesting, if more difficult to design, than the ordinary block of four or six. Few pairs were built, it being felt that this unit was too small for successful handling in streets. As the illustrations show, great care was taken with the detailing, especially with regard to chimney caps, doorways, and windows. The latter have a standardized pane size of $7\frac{1}{2}$ by $10\frac{1}{2}$ throughout the job.

Swanpool is to-day unfinished, but it stands as a lasting monument to the goodwill and courage of two large-minded employers of labour and a committee of altruistic, if somewhat unpractical, working men, who have at least done something worth doing in a city.

NOTE.—The lay-out of Swanpool was published in the JOURNAL of July 16, 1919.



SWANPOOL GARDEN SUBURB: A PAIR OF COTTAGES.

HENNELL AND JAMES, ARCHITECTS (LATE THOMPSON, HENNELL, AND JAMES).

The Franco-British Union of Architects

Second Annual General Meeting and Visit to Paris

By H. BARTLE COX, A.R.I.B.A. (Member F.B.U.A.)

THE foundation of some real bond between English and French architects was long felt a necessity by the leading practitioners on both sides of the Channel. The Franco-English architectural exhibitions of London and Paris in 1913 and 1914 further suggested the creation of some officially amalgamated society or association. The chief promoter of this happy idea was the ex-president of the R.I.B.A., Mr. John W. Simpson, Membre Corr. de l'Institut de France. Mr. Paul Waterhouse, at the Franco-English conference held in Paris, November 1920, when thanking the Société des Arhhitectes Diplômés for their warm reception, advocated the giving of concrete form to this "Union." It is now an accomplished fact. Both English and French are, in a large measure, indebted for the realization of this Union to the generous way in which Mr. H. P. L. Cart de Lafontaine has so ably discharged his functions as "Secretary-General." The first Séance Générale of the F.B.U.A. was held in London on October 24, 1921, in the rooms of the R.I.B.A., and the second annual general meeting has just taken place in Paris.

Objects.

According to article 9 of the Statutes, French is the official language for the minutes and for correspondence. It is stated that: "L'union Franco-Britannique des Architectes" was created November 12, 1920, and that the objects of the Union are :—

To symbolize and to secure the bonds of fellowship between the architects of France and of Great Britain.

To improve their personal and professional relationships and to strengthen their claims.

To contribute to the advancement of architectural education as well as to the progress of architecture in both countries.

To encourage French and English architects to render each other mutual service, and to facilitate intercommunications on this matter.

There is a British and a French section of the Union which is composed of :—

1. "*Membres d'Honneur*" (Royal personages, Heads of State, Ambassadors, Ministers, and patrons of the art of architecture in the two countries, limited to the number of forty), elected at the "séance générale" upon the motion of the President. These members have no vote.
2. "*Membres Titulaires*" (of an unlimited number) composed of qualified architects from both countries. A Frenchman to be proposed by two Englishmen and an Englishman by two Frenchmen, but an architect of either nationality can be elected by either section upon the proposal of the other. The president and vice-president are to be a Frenchman and an Englishman, in turn.

Among the original members of the Union are twenty-five Frenchmen and twenty Englishmen, all men of note; from the latter of which appear the following names : Aston Webb, Reginald Blomfield, John J. Burnet, John W. Simpson, Paul Waterhouse, A. N. Paterson, A. J. Davis, Cart de Lafontaine, etc.

Séance Générale.

For the second general meeting a visit to Paris was arranged, and the English contingent, for the most part, arrived on Thursday evening, May 11. On Friday, 12th, the S.A.D.G. had commissioned a bus which conducted a party to the garden cities situated in the outlying districts of Paris at Les Lilas and at Drancy. The weather was bad, and only four Englishmen were able to avail themselves of this visit, which was particularly interesting to the French as showing the influence of English urbanism. Much might be said of these social undertakings, but ordinary comments would be idle without entering into the question of national customs and of French legislation, etc. They are, however, carefully thought out, artistically designed, and well adapted to the requirements. The party returned to Paris, lunched at the Hotel Lutetia, Boulevard Raspail, headquarters of the British Section while in Paris.

At 3 p.m. took place in the rooms of the S.A.D.G. the second annual general meeting of the U.F.B.A., with Monsieur Louvet in the chair. The minutes were read. The following personages were then nominated for the forthcoming session : President, Mr. John W. Simpson; Vice-president, Monsieur Godefroy; Secretary-General, Cart de Lafontaine; Treasurer, Monsieur Poupinel; Secretary of British Section, Arthur J. Davis; Secretary of French Section, Monsieur Schneider. Then followed a list of forty-three new members. The English being proposed by the French secretary, and the French by the English secretary. On the proposition of Mr. Simpson the following telegram was dispatched :—

"Sa Majesté Le Roi d'Angleterre,
Londres.

L'Union Franco-Britannique des Architectes réuniée en Séance générale à Paris prie Sa Majesté Le Roi d'Angleterre de bien vouloir agréer ses salutations respectueusement empressées. Le Président A. Louvet, Architecte diplômé par le Gouvernement.

59 rue de Grenelle, Paris."

The Englishmen who attended this meeting were : Messrs. Simpson, Lafontaine, Davis, Paterson, Bennet, Forbes, Tate, Hamp, Tait, Cox. Excuses were received from Sir R. Blomfield and Messrs. Dawber, Newton, Chaurès, Waterhouse, Lucas, Abercrombie.

After the deliberations a "Thé intime" was served, then some of the members made a flying visit to a part of the Ecole des Beaux-Arts premises, accompanied by M. Guadet (son of Julien Guadet, author of "Eléments et théorie de l'Architecture"), and by M. André (Professeur et Membre du Jury).

Versailles and the Salon.

Saturday, May 13, was a full day for those who took everything seriously. About thirty-five persons, including nine ladies, turned up for the visit to the Palace of Versailles, conducted by Monsieur Chaussemiche (Architecte en Chef) and by M. Guéritte, architect to the Palace. The invités were able to see many parts not shown to the general public, such as the theatre and the inside of the Orangery (a colossal piece of monumental architecture of first principles). Many of the members ascended on to the roofs. Lunch was served at a restaurant near the canal, after which the Trianon was visited before returning to Paris.

Through the kindness of our confrère, Monsieur E. Thoumy, Commissaire Général de la Société des artistes Français, members of the Union were invited to the Salon to a visit under the presidency of Monsieur Paul Léon, Directeur des Beaux-Arts. This year over twenty-five English architects have exhibited at the Salon, and their works for the most part are placed together. It is not a big nor an important show; some of the work is, of course, interesting, but not a little of it has been seen before. Taking it as a whole it shows no great effort. Perhaps something better will be organized for a future occasion. Architecture in England is in a curious phase just now; the old school, which was racial in feeling, with all its virtues and with all its vices is, fortunately, no longer in favour, but the new school, which is only English in so far as it is cosmopolitan, has not yet found itself. This is most noticeable at the Salon, and is not likely to improve until we get one Single Centralized National School and a revision of the building by-laws. Towards 5 o'clock Mr. Simpson gave, in French, a very interesting and pithy lecture on English architecture, naturally confining himself principally to domestic work. This was no easy undertaking before a French audience, but his remarks were greatly appreciated, and it is proposed to publish his lecture in the "Bulletin" of the S.A.D.G.

The Banquet.

The congress ended in the usual way, by a dinner, to which the English were invited. It was given in the rue Jean-Goujon, and was under the presidency of Monsieur Paul Léon, Directeur des Beaux-Arts. At this dinner were present forty persons, including M. Hélouis, representative of the Ministre des Affaires étrangères, M. Mora, Directeur des Services de l'Information (who accompanied President Millerand on his recent voyage), M. Nénot, Membre de l'Institut, président du Jury d'architecture, M. Bonnier, Inspecteur-général des services d'architecture et d'Esthétique et de l'extension de Paris, M. Formigé, M. Defrasse, and other well-known architects.

At dessert, M. Louvet, President of the S.A.D.G. and of the U.F.B.A. rose and

read a translation of the following telegram :—

"The President, L'Union Franco-Britannique des Architectes, 59 rue de Grenelle, Paris.

The King commands me to convey his warm thanks to you and the members of the Union Franco-Britannique des Architectes for your kind message and to express his best wishes for the success of your society. Private Secretary."

This was applauded, and M. Louvet finished by outlining the useful rôle of the Union. Mr. Simpson spoke of the tendencies and influence of the recently created group with a view to unite French and English architects.

M. Paul Léon then rose and gave a speech that was listened to with great interest. Artists, he said, should be the disinterested missionaries, and should be listened to for a "rapprochement" more and more desirable. He spoke in high terms of the "Section d'Architecture" at the Salon, and showed himself to be in favour of "Models."

After him Mr. Davis spoke of the artistic instinct of the French. He had noticed during the war how an ordinary "poilu" would stop to admire a church. His speech was well delivered and acclaimed with loud applause.

Among those present was also Monsieur A. Richardière, vice-president of the Société Centrale. He is delegated this year to represent that society at the annual dinner of the R.I.B.A. to be held in London on May 24. M. Louvet will represent the S.A.D.G. In this way an intellectual entente is kept up.

Architects' and Surveyors' Assistants' Professional Union

A meeting of the Metropolitan Branch of the Architects' and Surveyors' Assistants' Professional Union was held at Caxton Hall, Westminster, on Thursday last, to consider the question of Union Reconstruction. Mr. W. T. Plume, hon. A.R.I.B.A., presided.

The chairman, at the outset, expressed his best wishes towards the Union, and said that their perfectly legitimate claims must be recognized in the end. They were passing through a time which had changed men's thoughts very much, and had resulted in a much more sympathetic attitude towards employees. The Union could do much, not only in getting better remuneration, but also in the way of aiding better architecture and better building.

Mr. Charles McLachlan, in opening the discussion, said the reconstructed world they had heard so much about was not coming yet awhile, and they had to deal with the hard and unsympathetic world as it existed to-day. They must not, therefore, go away into the realms of aerial fancy. As regards architecture as a profession, quite 75 per cent. of the men who entered offices never established the business they thought of getting into at the outset. This was through no fault of their own, but because they had not the connection to secure the work. Before the war the lucky ones received salaries of about three guineas, and the employment on capital work was very casual. He was not dealing, of course, with those on maintenance work. The other side talked about "duds," and it would be well to consider if it was the system that made the "duds," or the "duds" that made the system. If they were to effect any improvement they must have a reconstructed programme. Registration had been suggested, and in the R.I.B.A. there was a movement for Unification, which he supported. He did not see, however, how the assistants were going to be materially benefitted thereby. To prevent further overcrowding the Union had asked the Institute to hold an inquiry, but the latter had absolutely declined to "father" that inquiry. There was only one thing for them to do, and that was to hold the inquiry themselves. As regards the Union's future programme, they must put the overcrowding question in the forefront, because it was impossible for them to secure fair treatment whilst members continually underbid one another to get a job. The Union had not abandoned the minimum wage proposals, and they only waited the opportunity for pressing them forward again. The wages were only minimum, and they would want higher salaries to be based upon them for more responsible work. The assistants wanted opportunity for initiative and to take greater responsibility. In conclusion, the speaker said the revised Union rules were in the hands of the printers, and they would comprehend sickness and unemployment benefits, and, perhaps, provision for old age.

Mr. T. Mitchell (secretary) then addressed the meeting on the aims and objects of the Union, and said that until they were an organized force they would never attain to the laudable aims the last speaker had emphasized.

Mr. W. H. Jackson thought the Union would do better if it was developed on the lines of a learned society, offering their own diplomas, etc., whilst sacrificing nothing of the principle for which they existed, and that was the betterment of the lot of the assistants.

Mr. W. T. Keay (general secretary, National Federation of Professional, Technical, Administrative, and Supervisory Workers) pointed out that there was a tendency for the workers' unions to perform the functions of the learned societies, and in some cases they were performing them better than the learned societies themselves.

Mr. T. Braddock said that every trade and profession was shouting out that there was overcrowding within its ranks. The simple reason was that when there was a shortage, the employer would set technical education at work and cause an overstock of brains.

Mr. G. Strachan (general treasurer), whilst being quite in sympathy with the learned society movement, said the Union must not lose sight of its real point, and that was the question of salaries. The question they had now to ask themselves after three years' experience, was whether the Union was necessay, and if it was, why had not members come in in greater numbers ? Personally he thought there were too many "sitting on the fence," ready to walk in when the work was done.

Mr. W. H. Howard said the Union in its critical early days had had the misfortune to meet the aftermath of the greatest war they had ever known.

After further discussion the chairman said that although progress might be slow he was convinced that the Union would prosper. The suggestion that they should be a learned society was a good one, and would probably quicken interest, but they must see that in carrying that out they did not overlook their main object.

The meeting concluded with a vote of thanks to the chairman.

A.A. Visit to Sutton Place

By the special courtesy of the Duke of Sutherland a large number of members of the Architectural Association paid a visit to Sutton Place, near Guildford, on May 13. Sutton Place was built between 1520 and 1530. If not the earliest it is at least one of the first extant specimens of an English mansion house, built wholly as a peaceful dwelling and entirely without any consideration of defence. Down to the end of the fifteenth century all the houses in this country of any importance or size were built either as a castle, or as castellated mansions, in the form and spirit of a castle.

Sutton Place is also one of the earliest buildings to show the coming change in style, which was later to expand into the Renaissance period. There are many evidences of Italian influence in the conception, as far as the embellishment of the building is concerned. For instance, the windows, with pointed and cusped heads, are Gothic, while the amorini over the door and in the parapet are equally Italian in feeling. Terra-cotta has been used largely, mullions, turrets, arches, quoins, and finials being all modelled in that material, with all exposed surfaces covered with intricate and delicate designs. The brickwork in which the walls are built is very fine, and shows the diaper of darker bricks characteristic of this period.

As originally built, Sutton Place consisted of a quadrangle of which three sides remain standing. The fourth which has disappeared, contained a gateway, and a large tower 70 ft. high. This side was severely injured by fire some years after the completion of the building, and it may be that the damage then done was never repaired before the whole side was removed. With this exception and the addition of some domestic offices the house remains to-day practically as when first built.

The planning of the interior is on traditional lines, and is a series of magnificent rooms with the walls covered in panelling, and with hangings of tapestry. Of these rooms the long gallery on the first floor was probably the finest. The period that the house was built in is too early to find examples of the elaborate plasterwork which one would expect, and even the plain ceilings seen are probably later additions.

The gardens, like the house, reveal the changes occurring during Henry VIII's reign, and show how their designers revelled in the new freedom from restrictions. The gardens are not extensive but are perfect of their kind, and one would have spent more time than was available in enjoying them. Whilst other gardens have been added, one is glad to see that they are in character and follow on the traditional lines of the earlier work.

R. W. S.

Contemporary Art

The London Group

"With largeness and a fine *laisser-faire*" might well be the motto of the L.G.; for the London Group, unlike the Prime Minister, does things composedly and without the least strain. It's a healthy body, this London Group, and its forty members should feel satisfied with the work turned out both by themselves and their friends. Inevitably, many of the artists whose works are shown here also exhibit elsewhere. Therefore, a leavening similarity of tendencies is to be observed at times. Here, once more, we find much ability. The 121 exhibits are representative; most are decidedly worth having been painted; a few people, of course, will raise eyebrows in astonishment, and one or two especial bits of "extra stuff" will so disturb dear old ladies out of their staid behaviour as to make them laugh the shrill laughter of scorn and peccant disapproval. But what matters as long as one gets a tap of pleasure or a kick to outrage one's senses?

All the usual names are in the catalogue, and all their possessors do their best, no doubt, but it is inevitable that a few should loom larger than the rest. Roger Fry is here, very militant, withal very urbane. How often, both in his writings and paintings—how often has Mr. Fry burnt his vessels with an admirable "beau-geste," and how often has he forthwith swum back to start again! Ah, the ebulliency and charm of Roger Fry, dear sirs—his reasonableness, his many perversities, his few contritions! *Chi troppo s' assottiglia, si scavezza.* "Very well, then," says our man, "I'll be clear and simple"—and he gives us the lovely "Valley of Vaisson" (35), with an irresistible rhythm of river and road and of landcliffs, a landscape bathed in sunshine and cooled with translucent shadows; and then he gives us a "Nude" (49) of such classicism as to make us gasp; and furthermore, in order to make more complete our bewilderment, he adds "The Church of Ramatuelle" (74), a large unostentatious canvas, with four centuries of Roman Catholicism wafted in the incense-laden atmosphere of its chancel. To look at Duncan Grant's "Landscape" (48) near by is to realize the wide gamut of Fry's artistry, for Grant is an erstwhile pupil of his, and his paintings are even now unto Fry like unsweetened honey. Most architects will love Savo Popovitch's "View from the Kitchen Window" (43). It has an unusual viewpoint, from some top floor, and the eye plunges down on a mass of backyard gardens, all shown in telling browns and greens. It's very effective. By the same artist, but done in an even bolder mood, with even better results, is the "View from Morn Hill, Winchester" (56). There is a directness of design and colour alike which is mightily pleasing, and the mind which dares put on such unmitigated red in such a spot, in the right-hand corner, is no ordinary mind.

Two more significant works should be singled out. Miss Watson Williams has a very original mind, going by her "Little Restaurant, Paris" (60), which restaurant with its bourgeois couple, red chairs, and "femme gaie" is delightful. But where this originality sins against its good name is shown further on, where a Gauguin-like and malodorous "Nude, grey and brown" (84) is to be seen. Now, this vast naked negress may have desirable features, artistic features (although the chances are indeed remote); but with such an abandoned pose as she assumes, and with such turpitude on the part of the artist, they are never given a chance; all that's left is a mass of chocolate flesh, unlit by any light, and rotting with dullness. The other significant thing is a very striking and fine "Torso" (120), by Frank Dobson. Small, compact, with a self-contained sweep of the arms closing about and hiding head and breasts, this Torso lives with a vehement life of indescribable charm. Carved in hard wood, lissom, strong, and taut, it stands there, as one of the very best things in the exhibition; and I, for one, should I ever back a winner, would buy the thing at once, so mighty is my love of it. But go you and see for yourself.

"TORSO." BY FRANK DOBSON.
FROM THE EXHIBITION OF THE LONDON GROUP AT THE MANSARD GALLERY.

The Friday Club

It is with clock-like regularity that our gifted schools of painting hold their exhibitions these days—the youngish ones, I mean, because the old, crusty, and respectable ones have always been regular in their habits.

And so one looks forward to the Friday Club show every spring, and every spring it brings forth its meed of excellent things. This year is no defaulter. There is freshness, sincerity, ability, and, here and there, little whirlpools of artistic cussedness along the walls of the Goupil Galleries, where it now holds its exhibitions. The members are seriously minded; theirs is no anyhow stuff. No anyhow by any means—and theirs are the sort of oils, or water-colours, or drawings which appeal widely to divergent tastes. Hence, you should go and see them.

You would probably like Mrs. E. Clarke Hall's "Children and Landscape" (49), because they are exceedingly alive and fresh; and you would, perhaps, point an approving and discreet finger at an *eau-douce* by Elsie Druce, called "San Miguel, Granada" (7), on account of its happy facility of design and execution; and, as you went along, more and more taken by such thoughtful drawings: "Nude" (29), by L. Cubitt Bevis, or "St. Victor, Marseilles" (21), by H. Rushbury, you might be stopped all of a

sudden by the manly and extremely simplified oils of Mr. Robert Bevan, who proves himself once more a tower of strength. His Polish land- and village-scapes are very, very nice; one feels that he just couldn't help sitting down, at sight of these cottages and pubs and trees, to draw and paint them with his customary solicitude; and so, from one nice thing to another, you would go on and admire M. Milne's "Girgenti" (41), a weird, strained impression, and Paul Nash's "Tree Study in Green and Black" (42); above all, his "Snow on the Marsh" (32), which one of you discerning readers will wisely buy—until D. Bomberg, with his "Home Coming" (15), pulls you up sharply. Mr. Bomberg cannot yet bring himself to say good-bye to his German friends the Expressionists, and one suspects him of uttering, with a toss of the head, made more reckless by Mr. Coué's apophthegm : I am getting every day and in every way more and more bombas—bombergian — which is true. Every organism contains its own antidote, and the Friday Club is no exception. Here, for instance, is C. R. Nevinson's "Versailles" (54), a nicely poised affair, of indeed great charm—colour, massing, stability, it has all these. It is a fact that whenever this artist is really moved, he lets you know it in unmistakable and winsome fashion.

R. Thlee, in "Study of Bottle" (109), has struck against an excellent object. You should also go and see his Bottle. It is what our workmen would call a bit of all right. It's indubitably a fine, handsome bottle, and so good is the pattern woven round it, and so excellent the colour introduced, that you forget to ask yourself why there aren't any more such things floating about. His is empty because, of course, you cannot drink your ale and paint it ! With "The Fall of the Tower of Babel" (104), Mr. Thomas Lowinsky enters, as seen by his terrific eye, the sombre regions of metaphysical dadaism. *Nil peccant oculi si oculis animus imperat*, said Publilius Syrus; *nil peccant*, echoes Mr. Lowinsky in a cavernous voice, and so one glares at a large canvas, covered with flying sticks and bricks, grey sticks and pink bricks, all in an extreme state of agitation, and all hurled against a salmon background of cosmic ether. It is with great difficulty that the frame stops them from falling on the floor, so great is the wrecking of Lowinsky's Babel Tower. Oh ! to be a painter and shove it on, and have such fun ! !

G. HOLT.

The Value of Public Opinion

With Mr. Fletcher in the chair, Mr. Halsey Ricardo read a paper on this much-discussed subject to an interested audience at the R.I.B.A. last Thursday.

Mr. Ricardo laid his finger on the very root of the matter when he begged the laity to cultivate its power of observation. Observation, he said, begets care, care begets insight into the conditions of production, and thence follows judgment. Observation implies discrimination, and that involves analysis of the ways and means of production, of the ideals aimed at, of seeing past the work into the mind of the workman.

Such inspection is due to the architect and the craftsman who planned and erected the building. Five hundred years ago, almost everybody was competent to pronounce on any work, since the canons of criticism were simple te that almost everybody could and did appl The market crosses, for instance, we matters of popular interest, and t economic side of an undertaking was matter of public consideration.

From this happy time, Mr. Ricar traced public opinion through its vario phases, past Carlyle and Ruskin, up the present day.

Reiterating his plea for observatio the speaker laid stress on the respo sibility and duty to others that we have as citizens and members of t Empire. Observation is an integral pa of the boy scout's training, but with t general public the difficulty of se education is evidently so great that prefers to form its judgments secon hand. Apathy leads to acquiescence needless evils, to a kind of fatalism, false judgments and canons of taste. T Englishman resents novelty until appreciates its purpose.

Mr. Ricardo protested strongly again the defacement of the countryside huge advertisements, and against t horrors of modern graveyards with the gruesome symbolism. Speaking of t slums, he asked why the public shou permit squalor in the streets that it wou not for an instant tolerate in its houses

Mr. Fletcher said that the moral of t lecture was plain : "Use your eyes, a care about everything."

Mr. William Woodward, proposing vote of thanks, complained that wom especially were not capable of criticizi architecture or sculpture.

Major Corlette did not agree. H thought that women were more critic than men. They were keen on desig and understood colour and form.

THE CHURCH OF RAMATUELLE.
FROM AN OIL-PAINTING BY ROGER FRY, IN THE EXHIBITION OF THE LONDON GROUP.

Testing Heating Installations

By E. W. MURRAY, A.M.I.E.E., M.J.I.E.

IT is the usual practice to test the hot-water or steam heating in a building before the installation is accepted and the contractor is freed from his responsibility. In the majority of cases these tests are carried out before the buildings are occupied. The usual guarantee of the contractor is that some desired temperature will be maintained inside the building relative to some external temperature. The figures in this country are usually 60 deg. F. inside, with an outside temperature of 30 deg. F. This type of guarantee is by no means satisfactory, although the temperatures given may be obtained on test. Stoking periods also are hardly ever given by the contractor in the guarantee when giving guaranteed temperature; and the question of air changes in the rooms themselves is seldom dealt with.

These points have a very important bearing on the heating surface installed. In one installation known to the writer, it is necessary for the heating boilers to be fired for a full twenty-four hours per day with all the windows and doors closed in order to keep the building at the guaranteed temperature. When the boilers were banked during the night shift period, the desired temperature in the building was not obtained until about noon on the following day.

It must be realized that a definite number of heat units are required during the twenty-four hours to keep a building warm. For an office building the heat units required are more or less as follows:

(*a*) Heating required during daytime when the building is occupied. The heating surface should be sufficient to maintain the temperature desired, notwithstanding the unavoidable changes of air occurring through the opening of doors, etc., and the air leakage round doors and windows.

(*b*) Heating required during night when the building is closed. The heating surface is already in existence, and the temperature of the water, or other heating medium, can be much lower. The heating required is naturally less than in the daytime, and it is usual during this period for the boiler to be banked and to be left without an attendant. The approximate ratio of the heat units required during working hours as compared with the silent hours, viz., *a* and *b*, is somewhere in the region of two to one.

Eliminating the variations in radiation losses, the heat units required to keep a building comfortable is to all intents and purposes constant, and is entirely independent of the system installed, or of the sequence during which the boilers are fired.

By employing three shifts—or, in other words, continuous firing—in an installation, the amount of heating surface may be less than that in which the boilers are banked during certain periods of the twenty-four hours. This may be explained as follows: A mass of materials absorbs heat when it is below the surrounding atmospheric temperature, and gives up heat when it is above. Thus the walls, floors, ceilings, furniture, etc., have the property of absorbing heat when they are below the temperature of the surrounding atmosphere, and of giving up this heat when the surrounding atmospheric temperature is lower.

To explain more clearly this point with regard to the smaller heating surface, a more or less concrete instance—that of a continuously fired installation in which the heat change is observed during a period of twenty-four hours, say from six o'clock in the evening when the building is closed—may be considered. The temperature of the building will gradually increase from 6 p.m. onwards until the building is occupied the following morning, and the walls, floors, ceilings, etc., will have attained more than the normal comfortable inside temperature of the building. Occupation of the rooms will cause the air to be changed, i.e., hot air being expelled and cold air drawn in to replace it. This cold air has to be warmed. The heating surface of the radiators and pipes alone is not sufficient to give the requisite heat to balance the air changes, and the deficiency is made up by the loss or discharge of heat from the walls, floors, etc., into the building. A very interesting instance of this is St. Peter's, Rome, where the walls are of such a thickness that sufficient heat is absorbed during the summer to keep the building comfortably warm in winter. The only point in favour of this type of installation is its low initial cost. As regards running costs it is uneconomical in the use of fuel, owing to the high heat losses during the silent hours and the additional or third shift labour cost. It is also unsatisfactory from the heating point of view, owing to the usually high temperature of the radiators employed and its effect upon the air. The high radiator temperature burns or chars the epithelial scales in the atmosphere, and produces the characteristic pungent odour of such installations.

The reverse of the above case, i.e., excessive heating surface, is just as unsatisfactory as regards the general question of ventilation and heating, if the high radiator temperature is to be adopted, although, perhaps, it is not quite so uneconomical in running costs. With more than sufficient heating surface provided, the period during which the boilers can be banked and left unattended can be considerably increased. The extra heating surface enables the air and the building itself to be heated quickly to the required temperature. When this has been attained the heavy firing is stopped, and the fires more or less banked. Usually the high radiator temperature is maintained in order to increase the hours for banking. This installation proves unsatisfactory for the following reasons: A person standing in front of a heater, and having a block of ice at his back, endures somewhat uncomfortable conditions owing to the rate at which he receives heat from the heater and loses the heat from his body to the ice. The rate at which the body receives or loses the heat is the main point to bear in mind in any heating or ventilation scheme. The body is so sensitive to changes or abnormal differences in the loss or gain of heat that this latter scheme cannot be considered as anything but unsatisfactory. A person in the building will be sensible of the heat from the radiators, as well as of the loss of heat from his body to the walls, floors, and furniture. From the architectural point of view it is also worth while to consider whether the too rapid heat changes are detrimental to the fabric of the building owing to expansion and contraction.

The most satisfactory conditions are those found in an installation where the heating surface does not exceed a mean temperature of 150 to 160 deg. F., and where the heating surface will keep the building in the "steady state"; there being just sufficient heating surface to make up the loss of heat from the building, and also to warm the cold air which is more or less continually replacing the warm air. The heating surface required to deal with the air changes only is not easily obtained. These changes cannot easily be ascertained, and no one, except, perhaps, the occupant of the room, has any jurisdiction over the number of times the door of the room is opened.

The proposition resolves itself into one of general practice, and, after allowing sufficient heating surface for the losses through walls, floors, ceilings, and windows, additional heating surface is added to cope with the air changes which have to be more or less assessed. In general practice a small room for one or two persons would be assessed at three to four changes per hour, and in a large room one change per hour might suffice, each case being more or less considered on its merits.

The writer does not profess to be infallible in the foregoing remarks, but the proposition of heating a building appears generally to have received comparatively little attention, and it is only when complaints are made that one realizes its importance.

From the occupier's point of view a heating installation cannot be tested satisfactorily with thermometers, unless the building is under normal working conditions. The more satisfactory method is to survey the installation when the heat losses to be overcome are known. This can be done from the plans of the scheme, provided that they have been checked with the plant actually installed. For this section of the test it is not necessary for the boilers to be working. Of course, the boilers must be in operation to ascertain whether the various circuits are more or less balanced or working satisfactorily, and to arrive at the general performance of the installation as regards pipe expansion, leaks, and air locks.

This loss of heat is the quantity of B.T.U.'s raised by the boiler under firing conditions minus the B.T.U.'s raised by boiler under banked conditions.

In a large building the heat cannot reach the "steady state" until some days have elapsed. In the case of a well-known provincial building the boilers were fired continuously night and day for some eleven days before the "steady state" was attained. A further test on the same building, with intermittent firing, i.e., the boilers banked during the night, showed

that much the same time elapsed before the building reached the "steady state," but in this case the temperature remained at 5 deg. F. or 6 deg. F. lower than in the former test. This showed that the heat lost from the building to the outside atmosphere was greater than the heat given up by the heating installation. In an instance such as this, where the boilers are banked during certain periods, additional radiating surface, and probably boilers, would be necessary to compensate for the loss.

Particular notice should be taken of the position where pipes pass through walls or ceilings. The pipes in these positions should be lapped with a layer of hair felt, and the plaster or cement finishing coat should have a small clearance round the pipes. This prevents the breaking of the surface that so often occurs round the pipes through the movement by expansion and contraction of the latter.

For the same reason bends or sets in the pipes should never be buried in floor, wall, etc., unless ample expansion space is given.

When comparing tenders for heating installations the points to be particularly looked for are as follows :—

1. Ample heating surface to be provided in the radiators or pipes.

2. Mean temperature of the radiators not to exceed 160 deg. F.

3. The hours during which the boilers have to be fired to maintain required temperature with normal ventilation.

4. The hours during which the boilers can be banked without lowering the temperature of the building below normal.

The latter item (4) is governed to a large extent by the fuel space in the boilers. It is generally during the greater part of the banking period tha the building is closed or unoccupied.

The above details should be accuratel stated, as well as the area of the heatin surfaces in the various parts of the build ing, and the heat units per hour, at a flo temperature of, say, 180 deg. F., witl which the boilers have to be capable o dealing. These conditions would pre vent those contractors who have more o less a free hand from quoting for a installation with small heating surface at a high temperature.

The type of installation with too muc heating surface is rarely if ever met i competitive tendering. It is mentione only to show that it is unsatisfactory Such installations, usually supported b the economy plea of the shorter hour during which the boilers require attention have been heard of.

The Stability of Walls.—II

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

WE saw in the last article (p. 694) how a pressure against the face of a wall increased the pressure on the outer edge at the base and reduced it on the inner edge. If the pressure against the wall is increased so that the combination of the pressure and the weight of the wall push the resultant beyond the middle third of the base then new conditions arise. First let us suppose that the mortar joint at the base of the wall permits of some resistance to tension. Assume the horizontal pressure to be 120 lb. against the face of the given 9 in. wall, 6 ft. high and 4 ft. long, then the calculation will be

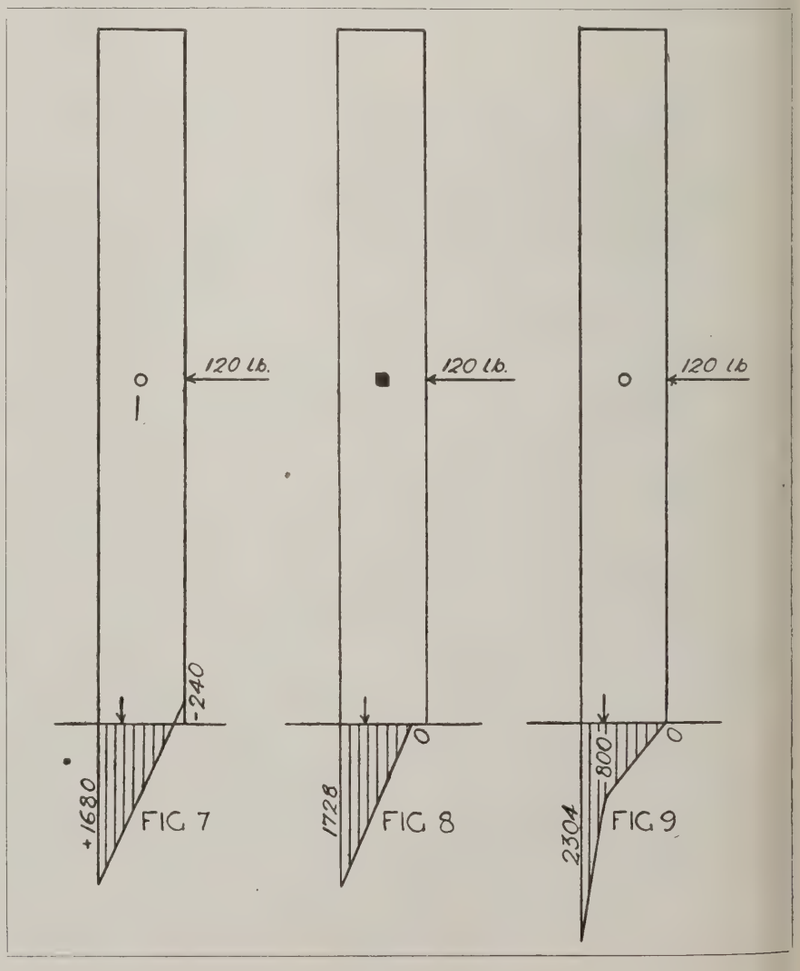
$$\frac{W}{A} \pm \frac{M}{Z} = \frac{2160}{4 \times \frac{9}{12}} \pm \frac{120 \times 3}{\frac{1}{6} \times 4 \times \left(\frac{9}{12}\right)^2} = 720 \pm 960,$$

or 720 + 960 = 1680 lb. sq. ft. compression at outer edge, and 720 — 960 = 240 lb. sq. ft. tension at inner edge. Good mortar, 1 lime 2 sand, will safely resist a tensile force of 15 lb. per sq. in., or 2160 lb. per sq. ft., so that the wall would not be pushed over. The distribution of stress at the base would be as shown in Fig. 7.

Now take a new condition of things and suppose the same pressure of 120 lb. against the face of wall and that no tension is permissible at the base. By the theory of Professor Crofton, of the Royal Military Academy, Woolwich, this is possible. He assumes that the surface resisting the pressure is three times the distance of the resultant from the outer edge. The distance in this case may be found thus : As 2160 (lbs. weight of wall) is to 36 (inches height of force applied) so 120 (lbs. force applied) is to x (inches distance of resultant from centre of wall or $x = \frac{36 \times 120}{2160} = 2$ in.). Then 2 in. from centre of wall will make the distance from resultant to outer edge $2\frac{1}{2}$ in. By Professor Crofton's formula, p = maximum pressure lb. per sq. ft., W = lbs. weight of wall per ft. run, d = distance in feet of resultant to outer edge, then

$$p = \frac{2}{3} \frac{W}{.d} = \frac{2}{3} \times \frac{540}{\frac{2\frac{1}{2}}{12}} = 1728 \text{ lb. sq. ft.}$$

as shown in Fig. 8, but the safe load on stock brickwork being 3 tons sq. ft. = 6,720 lbs. we shall have a margin of $\frac{6720}{1728} = 3{\cdot}9$, or, in other words, the wall is only stressed to one-third of its safe limit. The more thoughtful reader may perhaps find a difficulty in realizing how two firm surfaces in contact can have pressure upon one part withou having some pressure all over. It is easy to imagine the pressure varying, but no to have a distinct portion without pres sure. To get over this difficulty th writer suggested many years ago a nev theory by which the whole surface wa under some pressure, the change bein regularly graduated on each side of th



esultant. The formula was $P = W\left(\frac{2}{a} - \frac{4}{l}\right)$ which in the present case

$= 540\left(\frac{2}{2\frac{1}{2}} - \frac{4}{9}\right) = 540\,(9\frac{3}{5} - 5\frac{1}{3}) = 2304$ lb. sq. ft.

naximum pressure. The pressure under he resultant will be

$p_o = W\frac{4d}{l^2} = 540 \times \frac{4 \times 2\frac{1}{2}/12}{\left(\frac{9}{12}\right)^2} = 800$ lb. sq ft.

as shown in Fig. 9.

There is another way in which the wall nay fail from a pressure against the face, whether from wind, earth, water, or otherwise, and that is by sliding on the base. The friction varies with the whole veight of the object moved, and the nature of the surface upon which it moves, but is independent of the area of he surface. The friction of a fresh nortar joint is about 0.45. In this case he wall weighs 2160 lb., therefore a orce of 2160 × ·45 = 972 lb. applied at he centre would be required to push it off the base.

At this point it would be interesting to note the wind pressure that would be equired to blow a brick along the round. Let the brick be assumed as in. by 3 in. by 4½ in. lying flat on the round with a 9 in. by 3 in. face exposed irectly to the action of the wind. The rick will weigh, say, 7 lb., and the co-fficient of friction about 0.4, then the ressure to overcome the inertia of the rick would be $p = \frac{W \times 0{\cdot}4}{A} = \frac{7 \times 0{\cdot}4}{9 \times 3}$ = ·1037 lb. sq. in., or ·1037 × 144 = 15 lb. sq. ft. The reason we do not see ricks blowing about the yards is that he wind pressure at ground level seldom eaches so high a figure as 15 lb. sq. ft., lthough a few feet above the ground it is ccasionally strong enough to blow over tramcar or a railway carriage.

(*To be continued.*)

nstruction for Teachers of Building Subjects

If the number of suitable applicants is ufficient the Board of Education will rovide short courses of instruction for eachers in technical schools engaged in eaching building subjects. The courses ill run from Monday, July 24, to aturday, August 5, inclusive, and will e held at the London County Council entral School of Arts and Crafts and the ondon County Council School of Build-ng which the Local Education Authority ave been good enough to make available or the purpose. Teachers who wish to pply for permission to attend the ourses must fill up and return Form 952T. s soon as possible, and not later than une 10.

A teacher who is selected to attend one f the courses will receive free instruc-on, and, if he resides during the course way from his usual place of residence, ill at the end of the course have re-rned to him the third-class railway eturn fare (by the cheapest route) from is home to the centre, or such smaller m as may actually and necessarily have een spent in travelling to and from the ourse. No other travelling expenses .g. cab or omnibus fares) will be llowed. A grant towards maintenance, ot exceeding £2 for the whole period of the course, will also be payable. A teacher who resides during the course at his usual place of residence will be allowed daily travelling expenses, viz., a third-class railway return fare each day between his usual place of residence and the centre at which the course is held, or such smaller sum as may actually and necessarily have been spent daily in travelling to and from the course. The maximum sum payable for these expenses is 3s. 4d. per diem. No subsistence allowance will be payable to these teachers. It is hoped that hostel accommodation will be available for teachers who are not resident in London.

The students will be divided into three groups, and applicants are requested to state to which group they desire to be allocated: (*a*) The design of buildings (architecture and general design); lecturer, Mr. T. P. Bennett, A.R.I.B.A., Head of Department of Architecture and Building, Northern Polytechnic Institute, London, N. (*b*) The design of buildings (steel and concrete construction); lecturer, Dr. Oscar Faber, D.S.O., O.B.E. (*c*) The Science of plumbing; lecturer, Mr. A. S. Everett, B.Sc., Head Master Junior Technical School, L.C.C. School of Building, London, S.W. The lectures will be given from 9.30 till 12.0 in the mornings, the afternoons from 1.30 to 4.0 being devoted to general lectures, demonstration classes, and visits to works.

Registration

Mr. C. McArthur Butler, secretary of the Society of Architects, in a letter to "The Daily Telegraph," says: "It would seem that auctioneers consider themselves aggrieved because 'any rogue can take out a £10 licence,' a state of things which they hope to prevent by statutory registration. Architects have a similar but proportionately greater grievance, because any rogue may assume the title of 'architect,' and hold himself out to the public as such, without even a £10 qualification.

"Great Britain is probably the only civilized country where the public is not protected from this danger, and where the qualifications for and the practice of architecture are not defined and regulated by laws, such as have become operative during recent years in most of the States of America, the Dominions of Canada, New Zealand, and Australia, and in the Transvaal, where there is a movement to extend the Architects Act to the whole of the Union of South Africa. In France the possession of a Government diploma confers a recognized status upon the architect. In Great Britain the subject of the statutory registration of architects has been a burning professional question for nearly forty years. The pioneer efforts of the Society of Architects in this direction are a matter of common knowledge, and now that a 'Unification and Registration Committee,' representative of every architectural body in Great Britain and of 'unattached' architects, has been formed to carry on the campaign, the possibilities of progress are considerably improved. Architects in general, and those practising in the provinces in particular, know the urgent need which exists in the interests of the public for legislation which will 'close' the profession by 'opening' it so widely that all bona-fide architects may be admitted to the register on proof of qualification, and that in the future any person, without distinction of class or position, who wishes to become an architect, may after adequate training, and having qualified, obtain a licence to practise. Taxi-drivers, doctors, lawyers, and most other useful public servants have to prove their qualifications and comply with the law before they can hold themselves out to be practitioners in their respective callings, and it can be shown that it is just as much in the public interest that the qualifications for and the practice of architecture in this country should be defined and regulated by statute."

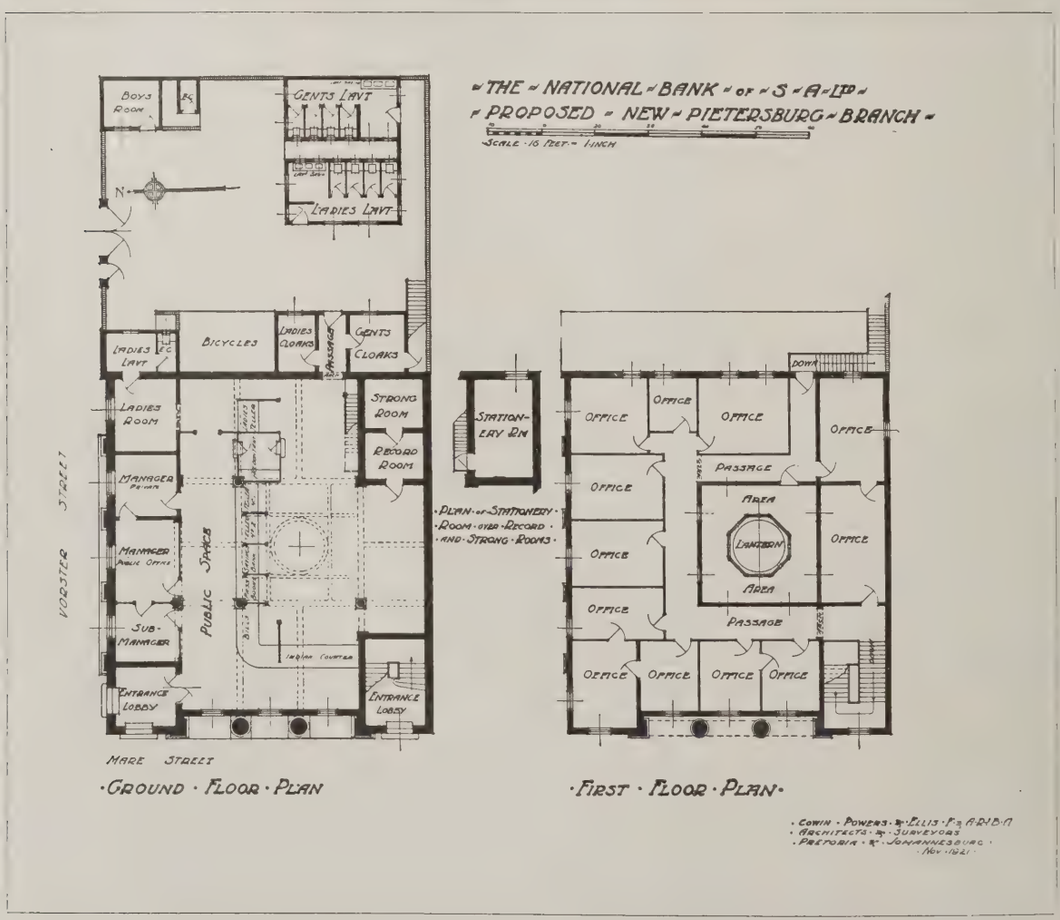
New Chief Architect for Singapore

Mr. S. Douglas Meadows, A.R.I.B.A., superintending architect to the Ministry of Agriculture and Fisheries, Whitehall Place, has been appointed chief architect to the Municipality of Singapore. As superintending architect to the Ministry he had the supervision of the architectural work under the land settlement scheme. Previous to his appointment with the Ministry he was engaged upon plans for the reconstruction of the City of Basrah, Mesopotamia, for the India Office.

At the end of 1914 Mr. Meadows joined the Royal Sussex Regiment, and later transferred to the Royal Engineers, passing through the School of Military Engineering, Chatham. In France he commanded the 203rd Field Company, and the 345th R. Company, R.E., and later became assistant Roads Officer, and finally Deputy Assistant Director of Roads for Mesopotamia. He served nearly five years in France, Belgium, Italy, Egypt, India, and Mesopotamia, etc. For his appointment in Mesopotamia Mr. Meadows was to be graded Major R.E., to rank as D.A.Q.M.G. The war, however, came to an end before he was gazetted.

Immediately on demobilization he was one of two finalists for the appointment of Housing Director to the City of Liverpool at £1,250 per annum. Mr. Meadows has had a unique experience in official architecture, having carried out many public buildings. Previous to joining the Army in 1914 he was chief architect to the Ipswich Corporation, and had the supervision and control of architectural work undertaken by the Corporation. Previous to this he was chief architect to the Corporation of East Ham, where he was engaged on many important public buildings. Mr. Meadows was also for a time architect to the Somerset County Council, and carried out important work in that county. His early experience was in Leicester and the provinces. He served his articles with Mr. G. Lawton Brown, of Leicester, and was assistant to other well-known architects in the Midlands. He has also been engaged himself in private practice in the Midlands.

Mr. Meadows is also a member of the Municipal and County Engineers, a member of the Town Planning Institute, prizeman of the London University for designs, and scholarship and prizeman of the Leicester Art School. He is a member of the Ministry's Committee, dealing with building and labour matters.



NEW PIETERSBURG BRANCH OF THE NATIONAL BANK OF SOUTH AFRICA.
COWIN, POWERS. AND ELLIS, F. and A.R.I.B.A., ARCHITECTS.

(*See page 767.*)

The R.I.B.A. Public Lectures

The new series of Public Lectures ranged by the R.I.B.A. is providing great deal of enjoyment for architects well as for laymen. This effort to erest the public in architecture is one the best things the R.I.B.A. has done, d last year's attendancy list was a terion of public appreciation. This ar Mr. Halsey Ricardo has already en the first lecture—on "The Value Public Opinion"—and to-morrow at o'clock, Professor Ernest A. Gardner, famous archæologist, will speak on Greek Public Buildings." Professor rdner is one of the greatest authoris on Greece and his lecture is tain to bring a large gathering to Conduit Street. He has lately been ing a series of addresses to the archi tural students at University College. Other lectures this year will be given Mr. W. H. Bidlake, Professor C. H. illy, and Mr. D. S. MacColl, the famous ist and Keeper of the Wallace Collec n. Those architects who are able, uld undoubtedly attend these lec es, in the first place, because they are ne of the most delightful of the year, l in the second place, because it is portant to support the Institute in its at effort to gain the ear of the public.

anch Bank at Pietersburg, South Africa

This bank has been erected from the igns of Messrs. Cowin, Powers, and is, of Pretoria, at a cost of £15,000. e bricks used are from Kirkness's ious Pretoria brickfields, and the nite was also obtained from Pre ia. The floors throughout are rein ced concrete covered with patent erfecto" flooring of South African nufacture.

Pietersburg is in the centre of a wealthy ming district to the north of Pretoria, l is a typical example of the usual country dorp of small and badly designed cottages and stores. The new bank premises strike a new note for the town, and it not only dominates the square on which it is built, but it is an example of the progressive programme the National Bank of South Africa are carrying out in some of the growing country districts.

NEW PIETERSBURG BRANCH OF THE NATIONAL BANK OF SOUTH AFRICA: E BANKING HALL. COWIN, POWERS, AND ELLIS, F. AND A.R.I.B.A., ARCHITECTS

(*See also page* 766.)

The Building Trades Parliament

There was an atmosphere of "funeral baked meats" about last week's meeting of the Industrial Council of the Building Industry. The lack of unanimity between employers and operatives which has characterized most of the proceedings of the Council up to date have come to a head in unmistakable fashion. It is hardly to the credit of either party that it should be found impossible for representatives of employers and operatives to consult on matters affecting the whole industry without such a display of mutual distrust, jealousy, and general ill-feeling as to render further discussion a mere farce.

The end of it all is that the National Federation of Building Trades Employers has resigned from the Council, a proceeding which will, as far as we can see, necessitate the immediate demise of that body, which, unless it can claim to represent all sections of the building trade, naturally carries no weight. The resignation takes effect on June 30 and it remains to be seen whether a new and more successful Council will emerge phœnix-like from the ashes of the old one.

Thursday's proceedings consisted of the usual interchange of amenities between the warring parties.

Mr. Storrs, the chairman, touched on the soreness between employers and operatives. There was, he said, a feeling abroad that the operatives, one object was to do away with employers altogether, and this did not tend to a peaceful atmosphere. The Government was also to blame, in that it had consulted both parties singly, instead of adhering to the Joint Council which it had itself set up.

Mr. Foster said that the situation was serious, and that the death of the Council would do harm to the building trade. There had been a great expenditure of time and money during the four years of its existence, and, after all, no institution, not even the church, ever came up to expectations. The Council had been formed under abnormal conditions, when war influences had demoralized both workmen and employers; there was slackness on the one hand, profiteering on the other. The Council was only what its members made it, and the full co-operation of all parties was necessary. They had begun with high ideals, but the generosity of employers had evaporated, and employers and operatives were drifting apart. A year's respite would give all parties an opportunity of thinking things over; he therefore moved that the Council should be held in suspense for that period.

Mr. Chessum opposed the motion, maintaining that idealism must come within the bounds of practical politics.

Mr. Barron and others joined in the discussion, and the motion was lost.

On Friday the Council considered the reports of the Safety and Welfare and Education Committees.

Correspondence

Unification Proposals

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The promised statement of the Unification Committee has at last met the anxious gaze of the profession. One looks in vain for a single note of conciliation towards the views of those who are opposed to its pretensions. It is Unification first, and Unification last, without any concealment of its intentions to entirely subordinate the Registration question to the fast and loose principle of flooding the ranks of the R.I.B.A. with all and sundry for the mere asking. Indeed, its attitude towards Registration is one of indifference, and it still persists in ignoring the vital point of how Unification is to be achieved in the teeth of strong opposition and threatened resignations.

The contention that only qualified men are to be admitted will deceive no one when it is remembered what has happened within the Institute in the past. Though, perhaps, not astonishing, it is amusing to find certain members of the Unification Committee deprecating correspondence upon this subject in the press. Whether they allude to that expressing opposition to their own aims, and would prefer to fight with both hands whilst those of their opponents are tied, precisely what happened until the Scheme A proposals were laid bare, does not transpire.

This statement has been well timed for R.I.B.A. election purposes, and it is to be hoped it will receive the careful study that it deserves, so that members may judge for themselves the price this Unification Scheme proposes to exact, and what prospect it holds out to them of realizing their long-cherished desire for Registration.

WILLIAM H. ASHFORD.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Municipal Housing.

The housing position in certain of our large towns has been the subject of questions put to Sir A. Mond in the House of Commons.

The Minister of Health, in reply, said that with regard to Swansea he had authorized the erection of 789 houses by the Swansea Corporation under the State-aided Scheme. Of these only 183 had been completed. He was of opinion that any alleged overcrowding would be best remedied by pressing on with the completion of the remaining houses. As to the housing situation in Newcastle, approval had been given under the local authorities' schemes for 1,003 houses, of which 482 had been completed, 289 were in various stages of construction, and 232 had not yet been begun. He would continue to keep the situation under careful review. At Bradford he had authorized the local authority to obtain tenders for a further 50 houses, in addition to the 854 already approved.

"Bracken Hill," Northwood

Our attention has been called to a rather obscure passage in the notes on "Bracken Hill," Northwood, which were published in our last issue, from which it might possibly be inferred that Mr. C. H. Biddulph Pinchard, F.R.I.B.A., was architect for the recent additions only. We should like to make it perfectly clear that Mr. Pinchard was responsible for the entire work, the house itself having been erected from his designs during the years 1913–14.

Trade and Craft

Change of Telephone Numbers.

The new telephone numbers of Mr. M. A. Morris, of Wood Wharf, Greenwich, S.E.10, and Robert Street, Hampstead Road, N.W.1, timber merchant and importer, are as follows: Museum 1768 (private branch exchange); Greenwich 55 (Wharf).

"Sulzer."

There are two articles of especial interest to architects in the last issue of "Sulzer," the house organ of Messrs. Sulzer Bros., of Winterthur, Switzerland, and 7 Bedford Square, London, W.C. These are "Hot-water Heating with Forced Circulation" and "Radiators and their Position." Both articles are clearly written, profusely illustrated, and full of practical and useful information.

Intercommunication Telephones.

The case for intercommunication telephones is presented in an extremely attractive form in a booklet entitled "Telephones at 1½d. per day, including Repairs, Maintenance, and Renewals," just issued by the Reliance Telephone Company, Ltd. A "Reliance" installation can be started with two instruments, and can be extended as and when required. An all-time guarantee of efficient service is given, as maintenance, repairs, and renewals necessitated by fair wear and tear are carried out free of charge. Complete installations are supplied on rental at a cost of from 1½d. per day per instrument. A liberal free allowance of cable is made, and only where the free allowance is exceeded is a small charge, as a contribution towards the cost of erection, made. The "Reliance" system is entirely automatic. No operator is needed. You simply depress a button or turn a dial, and you are through. Any department can speak with any other department, whilst two or more departments can be spoken to simultaneously. All the instruments can be in use at the same time, and yet there is no inductive cross-talk. If desired, an installation can be purchased outright and the subsequent maintenance arranged for at an inclusive annual charge. By renting an installation, however, a considerable portion of the capital outlay is saved, with the additional advantage that the installation is never allowed to become out-of-date or inefficient. The telephones are being used by the Egyptian and Sudanese Governments, the London Chamber of Commerce, and a large number of public corporations and private companies. The head office of the company is Goschen Buildings, 12–15 Henrietta Street, London, W.C.2.

A New Floor Polisher.

There is no need in these days to spend endless time in polishing linoleum or wood floors. A new floor varnish called "Tessaline," which removes all need of excessive physical effort, has been placed on the market. It is applied to the linoleum or wood floor with a brush as easily as an ordinary varnish, and imparts a rich, non-slippery gloss which, it is said, will last a whole year. Dust can be removed with a broom, while once in three or four weeks the surface may need to be lightly washed over with a flannel and clean tepid water. But saving of time and labour are not the only good qualities which commend this floor varnish to the notice of those responsible for the comfort, hygiene, and upkeep of the home. In addition to the rich durable gloss, "Tessaline" is claimed to impart a bright, clean appearance to linoleum, floor-cloth, and wood floors, while at the same time the original colours are enriched and revived and the surface fully protected against wear. A coat of "Tessaline" in colour can be applied rapidly and easily over any floor surface which has been previously coated with "Tessaline" and which through long and useful service at last shows signs of wear. It is supplied in a variety of colours which faithfully represent those of the hard and more expensive timbers. It stains and varnishes in one operation. Great economy can be effected in new houses (or in old houses where the floor boards are in good condition) by entirely discarding linoleum, floor-cloth, and similar covering and in their place staining and varnishing the floors with "Tessaline." A few rugs will impart an air of distinction to a room treated in this way. "Tessaline" is manufactured by Messrs. Robt. Ingham Clark & Co., Ltd., of West Ham Abbey, London, E.15, and 24 Grosvenor Gardens, London, S.W.1.

Law Reports

Cost of Altering a Cottage

Johnson v. Todd.

May 19. Official Referees' Court.
Before Mr. G. A. Scott.

In this case Mr. Joseph Johnso builder, of Halton Road, Canonbu claimed from Mr. W. T. Tanqueray Tod of the Cottage, Wanstead, £588 6s. balance of account for work done a materials supplied in altering and d corating the Cottage. The defence w that plaintiff agreed orally to carry o the work for an approximate sum £700, and that no extras were done.

Mr. Croom Johnson appeared f plaintiff, and Mr. Bartley for the defen

From the statement of plaintiff counsel it appeared that £950 had be paid on account, which defendant sa was sufficient, and he made some co plaints as to how the work had been do There was, said counsel, a further gene defence that the charges were not f and reasonable. The defendant furth said that neither he nor his wife h ordered certain additional work whi had been claimed for.

Mr. Bartley said that the agre approximate figure was £700 witho extras, and no explanation had been giv by plaintiff as to how that sum had ris to £1,500.

Mr. Croom Johnson, continuing, sa that extras admitted included £150 f alterations to the garage, £50 11s. 6d. f polishing furniture, and over £200 f supplying electric fittings, etc. The a mitted items accounted for a great de of the money, and he would be able show that the admitted things came well over £700.

A great deal of detailed evidence w given as to the work ordered and t manner in which it had been carried o and in the result

The Referee gave judgment for t plaintiff for £295 with costs; the £2 paid into court by defendant to be pa out in part satisfaction.

The Bradford Light and A Dispute

Semon & Co. v. Bradford Corporation.

May 15–16. Chancery Division.
Before Mr. Justice Eve.

His lordship resumed the hearing of t action brought by Messrs. Charles Sem & Co., Ltd., stuff and woollen merchan of Bradford, to restrain the Bradfo Corporation from cutting off the daylig from the plaintiffs' warehouse on t south side of Balme Street by the erecti of an electricity station on the oppos side of the road.

Mr. James Young, surveyor and valu of Bradford, stated that the erection the Corporation building would n affect the lighting of the plaintiffs' wa house to any extent, and it would still adequate for their business. The letti or selling value of the building would n be affected.

In cross-examination witness deni that a north light was an important co sideration.

This was the whole of the eviden and after hearing the respective couns his lordship reserved judgment.

The Week's News

Royal Opening of New County Hall.

The King has fixed the afternoon of nday, July 17, for the opening cere- ny at the New County Hall.

"Subsidy" Houses in Birmingham.

At Birmingham 614 houses have been pleted under the subsidy scheme by vate builders.

A Regent Street Improvement.

t is proposed shortly to rebuild the wn property, 14 Regent Street, at the ner of Carlton Street.

More Houses for Rugby.

Rugby U.D.C. have instructed the ns and Buildings Committee to pre- e a scheme for the provision of fur- houses and submit it to the Council.

The Late Mr. T. Batterbury.

We regret to record the death of Mr. mas Batterbury. He was elected an ociate of the R.I.B.A. in 1881, and a ow in 1894. He resigned in 1912.

Demolition of an old City Church.

he church of St. Catherine Coleman, church Street, is to be demolished. m the proceeds of the sale of the site s proposed to build a new place of ship at Fulham.

New Concert Hall for Newcastle.

scheme is under the consideration of City Council for the erection of a con- hall to accommodate 3,000 people, swimming baths, slipper and Turkish hs.

New Pavilion for Bognor.

t Bognor, Sussex, a new music lion is being erected in beautiful, laid out gardens. The hall will seat o people, and among the many at- tions to be provided will be a small and a bowling green.

R.I.B.A. Problems in Design.

he Problems in Design submitted by lidates for the R.I.B.A. Final Ex- nation and the Special War Examina- are on exhibition at the galleries of R.I.B.A. until Friday next, between hours of 10 a.m. and 5 p.m.

Town Planning Institute.

The Effect of Zoning on Land Values," interesting paper read before the n Planning Institute by Mr. F. G. endale, F.S.I., has been reprinted, ther with the discussion, in book n, by the Institute.

Glasgow War Memorial.

r John James Burnet has been in- ted by the Executive Committee for Glasgow War Memorial to send in sign for a cenotaph to be erected in t of the main entrance to the Glasgow Chambers.

Westminster School Extensions.

ew dormitories for the students of tminster School are being built in t College Street from the designs of E. Warren, architect. The building be four stories high. Sir James nichael is the builder.

Bishop's Stortford College.

mmemorating those connected with school who fell in the war, and also the jubilee of the establishment, a combined chapel and hall has been declared open by Sir Arthur Quiller-Couch at Bishop's Stortford College. The architect was Mr. Clough Williams-Ellis.

New Art Gallery for Hull.

Mr. T. R. Ferens, formerly M.P. for East Hull, has given a further £10,000 towards the cost of an art gallery for the city. He states that he will bear the total cost, which must not exceed £60,000.

Paisley Infirmary Additions.

A new annexe is to be added to the Royal Alexandra Infirmary, Paisley. Mr. T. Graham Abercrombie, architect, has prepared plans for six blocks of buildings, and the builder will commence work at once.

New Opera House for Colwyn Bay.

Plans for the proposed new opera house, winter gardens, and ballroom have been prepared by Mr. Arthur Hewitt, architect, of Llandudno, for Mr. W. Yates Gregory, the general manager of the Pier Company, Colwyn Bay.

Proposed New Library for Westminster.

The Public Libraries Committee of the Westminster City Council recommend the purchase by the Council of the interest of the Royal Dental Hospital, Orange Street, as a site for the erection of a library in place of St. Martin's Lane Library, which is now closed.

Suspension Bridge for Shrewsbury.

Shropshire Horticultural Society is about to provide a suspension bridge over the Severn at one of the prettiest spots in the borough. In the middle of June the Surveyors' Institution is making Shrewsbury its centre for its annual country meeting.

New School for East Lothian.

East Lothian Education Authority have had plans prepared for the erection of a new secondary school at Prestonpans. Mr. J. Carfrae, of Edinburgh, architect, estimates the new buildings at £19,000, but if a school of a quick-erection type was selected the cost would be £4,011.

Worksop's War Memorial.

The restoration of the Lady Chapel at Worksop, which has been taken in hand as the Priory Church Memorial of the 520 men from the parish of Worksop who fell in the war, is making rapid progress towards completion. The restoration has been carried out under the direction of Mr. Harold Brakspear, F.S.A.

Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to March 31 1922: permanent houses completed, 7,038; temporary houses completed, 650; reconstructed houses, 89; houses built under the private subsidy schemes, 1,530; making a total of 9,307. In addition, there are 12,521 houses under construction, of which 1,791 are being built by private persons with the aid of the Government subsidy. The total amount paid by the Scottish Board of Health in respect of the 1,530 houses completed under the private subsidy schemes is £368,929 13s. 4d.

The Late Mr. L. W. Ridge.

We regret to announce the death of Mr. Lacy William Ridge, who for many years was a member of the Board of Examiners (architecture) of the R.I.B.A., and from 1900 to 1910 was chairman of the Statutory Board of Examiners. He was elected an Associate of the R.I.B.A. in 1863, and a Fellow in 1879. He resigned in 1912.

New London Cinema.

A new cinema is to rise on the site of the old Tivoli music-hall in the Strand. The site has been acquired by a private syndicate, of which the directors are Mr. James White, Mr. A. L. Ormerod, and Mr. Thomas Dawe. Work is scheduled to begin in July, and the opening of the new super-cinema to seat 2,000 people will take place in March of next year.

Professional Practice.

Mr. J. P. Grant, A.R.I.B.A., has acquired the practice of the late Mr. Geo. Eley Halliday, F.S.A., F.R.I.B.A., whose offices at 9 Quay Street, Cardiff, he will occupy.

Messrs. J. Murray Easton, A.R.I.B.A., and Howard Robertson, M.S.A., S.A.D.G., architects, have moved to 7 Gray's Inn Place, Gray's Inn, London, W.C.1. Tel.: Holborn 5334.

Southampton Docks.

Plans of a great scheme of dock construction and extension at Southampton have been laid before the Parliamentary Committee of the Corporation by Major G. S. Szlumper, docks and marine manager of the London and South-Western Railway Company at the port. The scheme will take many years to complete, will involve the expenditure of many millions of pounds sterling, and provide work for thousands of men.

Lady Surveyors.

Results of the recent examination in connection with the Surveyors' Institution show that 738 candidates presented themselves for examination, and 478 proved successful, including two ladies—Miss I. T. Martin, who passed in the final division, having taken the intermediate a year ago, and Miss E. E. Perry, who took the intermediate. Both are assisting Miss Jeffery, of His Majesty's Office of Woods and Forests.

Berks, Bucks, and Oxon Measured Drawings Competition.

Five excellent sets of drawings have been submitted in the measured drawings competition of the Berks, Bucks, and Oxon Architectural Association. The drawings comprise Mapledurham House, thirteen sheets; St. Margaret's Church, Mapledurham, four sheets; Sonning Church, two sheets and one sheet of Norman

doorways; South Stoke Church, two sheets; Various Doorways, etc., seven sheets.

The first prize, value five guineas, has been awarded to Mr. R. J. Carter for the drawings of Mapledurham House, and the second prize, three guineas, to Mr. C. G. Willett for his drawings of Mapledurham Church. Mr. Carter is a pupil of Messrs. Willcocks and Greenaway, and Mr. Willett is a pupil of Messrs. Albury, Rising, and Morgan.

The assessors, Messrs. H. D. Rogers, M.A., and T. Rayson, A.R.I.B.A., of Oxford, spoke in high terms of the excellence of the work submitted. The drawings will be on view at an exhibition of local architectural work to be held in the Corporation Art Gallery in July.

Great West Road.

The Road Congress paid a visit to Hounslow to inspect the constructional work on the Great West Road. The road was planned by the Middlesex County Council to relieve the serious congestion of traffic through Brentford to Hounslow, but particularly in the neighbourhood of Brentford, where the main thoroughfare is so narrow and the volume of traffic so heavy that vehicles are often held up for long periods.

Reconstruction of a Siberian Town.

A committee has been formed in Vladivostok for the purpose of rebuilding the town of Nikolaevsk-on-Amur, Eastern Siberia. The plans provide for a town electric-lighting station, a commercial port with wharves, warehouses, and full equipment, the installation of a sewage system, water supply, and telephone service, and for the erection of 1,500 dwelling-houses. The committee invite the co-operation of British enterprise and capital in the work of reconstruction. Further details may be obtained on application to the Department of Overseas Trade, 35 Old Queen Street, S.W.1, quoting reference DOT/FR/5478.

Southend Improvements.

A scheme has been prepared for improvements to the pier and promenade at Southend. The scheme includes the removal of the present pier entrance; an extensive widening of the pier on the west side, that is, in the direction of Westcliff; the provision of a new theatre or winter gardens capable of holding 2,000 persons; bandstand; kiosks; and the conversion of the existing pavilion into a modern up-to-date dancing hall. It is estimated that the scheme will involve a capital expenditure of £250,000.

Coming Events

Thursday, May 25.

Chadwick Public Lecture at Belfast.—"Housing and Town Planning. By Professor S. D. Adshead, M.A., V.P.R.I.B.A.

Illuminating Engineering Society.—Annual meeting at Royal Society of Arts, John Street, Adelphi.

R.I.B.A. Public Lecture. — "Greek Public Buildings." By Professor Ernest A. Gardner, Yates Professor of Archæology, University College, London. 5 p.m.

Friday, May 26.

Town Planning Institute.—Meeting at Institute of Mechanical Engineers, Storey's Gate, Westminster: "Zoning Proposals." By Mr. Raymond Unwin, F.R.I.B.A.

Saturday, May 27.

Architectural Association. — Summer visit to Great Fosters, Egham.

Monday, May 29.

The Surveyors' Institution.—Annual general meeting and presentation of prizes. 5 p.m.

R.I.B.A.—"Colour in Architecture." By Mr. William Harvey, Owen Jones Student, 1915.

Architectural Association. — Special general meeting to announce result of election of officers and council.

New Inventions

Latest Patent Applications.

12574.—Anglo-Danish Concrete Constructions Co., Ltd.—Blockwo floors, etc. May 4.

12815.—Lancashire, A. E.—Buildin etc. May 6.

12206.—Pitou, E.—Suspended scaffol May 1.

12434.—Toone, H. B.—Veneered pane slabs, etc. May 3.

Specifications Published.

178473.—Marks, E. C. R.—Hollow bui ing blocks.

178484.—Chew, M.—Manufacture of fil boards.

157820.—Frank, P. A. R.—Means r rendering buildings and oth structures impervious to wa and oil.

178540.—Gunn, F.—Wall ties.

178547.—Woodman, A. F.—Constru tion of concrete walling and t like.

Abstract Published.

176960.—Walls. — Garthwaite, F., Clarendon Road, Crumpsa near Manchester.—The portio of a wall below ground level made damp-proof by slabs tiles formed with projections space them apart from the w and surmounted by a tile ca ping having a sloping top a inclined air-vents. Air-bric are inserted in the main wall the top of the air-cavity. I stead of the projection, na may be driven into the wall, loose lengths of iron or tie-ba may be used to space the til from the wall.

The above particulars are specially prepared Messrs. Rayner & Co., Registered Patent Agents, 5 Chancery Lane, London, W.C. 2, from whom readers this Journal may obtain all information free relating patents, trade-marks, and designs. Messrs. Rayner & will obtain printed copies of the published specificatio and forward on post free for the official price of 1/- ea

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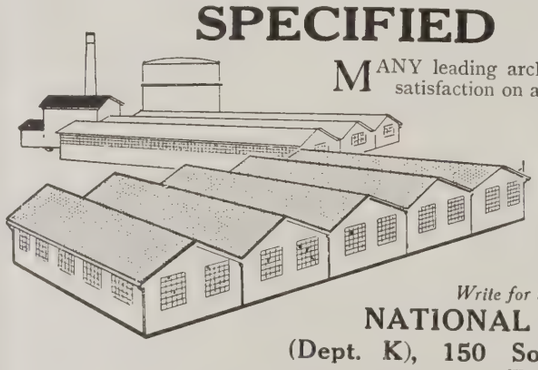

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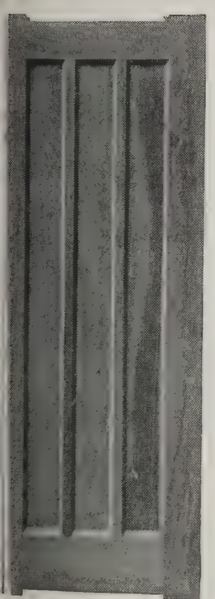

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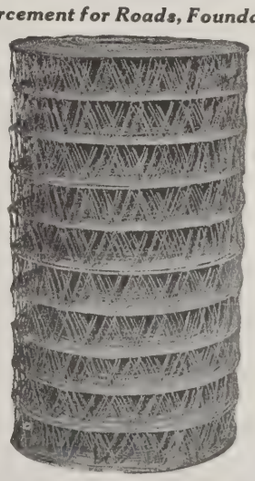

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Electrical Notes

High-Speed Wireless Telegraphy

LIEUT.-COL. A. G. T. CUSINS, in reading a paper on "High-Speed Wireless Telegraphy" before the Institution of Electrical Engineers, gave an interesting record of the experimental progress made towards the mechanicalization of wireless telegraphy in as simple and portable a form as possible. He said that the recent International Conference in Paris disclosed the disquieting fact that the ether was already in danger of being overcrowded.

Even taking into account the refinement which had been attained in selectivity, that was to say, in reducing the percentage difference in frequency at which two simultaneous messages could be received conveniently, and allowing full credit to the progress made in directive working both in transmission and in reception, even then the gamut of frequency over which operation was possible was very limited, and between the upper and lower limits, say from 6,000,000 to 6,000, or in wave-lengths from 50 to 50,000 metres, choice was further limited by the interdependence between the three factors: power, frequency, and distance. As the mutual interference between very large stations became more marked, it was possible that they would tend to be limited to operations over ocean tracts where distance was the deciding factor.

Over shorter distances it was suggested that the practice would arise of installing medium-power stations with a more limited area of operation and relaying traffic from one to another. Such a system, employing a geographical method of distribution of wave-lengths so as to minimize interference, should be very elastic and capable of expansion. In order to make full use of such a system, however, it was imperative that it be used economically by combining selectivity of reception and speed of operation; and in speed of operation must be included facility of relaying from and to adjoining stages of either wired or wireless communication.

It was such a system that was brought forward. In its actual form it was necessarily of a "semi-portable" type, that was, that the work of installation, dismantling, and transport was such as could be undertaken by the Signal Staff of one of the larger Army formations, a corps for instance. In the less cramped circumstances of commercial working in peace time there seemed to be no reason why it should not be brought to a very high degree of refinement and efficiency.

To transmit signals at high speed in the field complicated mechanisms were out of the question. They were now able to use the Wheatstone, on sets up to six kw., with an ordinary single-current key straight into the circuit without any intermediate mechanical device.

For remote control, whether at hand or high speed, the key was replaced by a Creed relay. The action was practically sparkless, in spite of the fact that th high-pressure voltage reached 9,000 volt

However, for the small sets, of abo two kw, now working between Aldersh and Cologne, trial was made of utilizin the anode-filament path of a sma "control" valve as the grid leak of th main generating valve. By operatin on the grid-filament circuit of the contr valve, the resistance of its anode-filame path might be varied enormously, and th oscillations of the main generating val be controlled instantaneously over the full amplitude.

The actual set at Aldershot which w now working to Cologne, operated on a aerial consisting of two 300-ft. wir between 70-ft. masts; earth resistanc six ohms; aerial current, ten to twel amperes. It had actually been the ca that an important message which ha repeatedly failed to get through by har transmission and aural reception, owin to atmospheric disturbance, was succes fully handled at high speed with aut matic reception.

The Post Office had been conductin trials of this somewhat under-power set, and traffic between London an Germany had been carried on a sing wire and earth between the Centr Telegraph Office, London, and Aldersho then from Aldershot to Cologne b military wireless, and from Cologn military wireless station to the Germa Post Office by wire.

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Wednesday, May 31, 1922. Vol. LV. No. 1430

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

CALCUTTA WAR MEMORIAL. JOHN GREAVES, ARCHITECT.

27-29 Tothill Street, Westminster, S.W.1.

War Memorials. 25.—Great War Cross in the British Cemetery at Longpr

Designed by Sir Reginald Blomfield, R.A., F.R.I.B.A.

The architectural work which has been done in the British graveyards of France and Flanders mostly consists of levelling and terracing the ground around the graves, the construction of stone retaining walls, the erection of entrances and gates, and, in the main cemeteries, of chapels and record houses. Each cemetery also contains the Great War Stone with, generally on the opposite side of the enclosure, the Great War Cross, as shown above.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

Wednesday, May 31, 1922 Volume LV. No. 1430

Shall Rights of Light be Abolished?

[T is understood that a Bill shortly to be brought before Parliament deals drastically with rights of light. Rumour has it, indeed, that the intention with respect to the law of ancient lights is not so uch to "reform it altogether" as to abolish all such ghts; but the text of the Bill is not yet published, and umour may be wrong.

That the law as to rights of light is greatly in need of vision everybody knows; but that any architect of experience would approve of their entire abolition is hard to lieve.

Justly and magnanimously applied, the law as to rights light would be equitable enough. The mischief arises m applying it oppressively. Undoubtedly a building ner has a moral right—and at present it is also a legal ght—to protection in the enjoyment of his fair share of e common light of day. If deprivation of a modicum of —that is to say, the overshadowing of his premises by the ction near it of another building—if such darkening rely interferes with his comfort or his pleasure, as for stance, in seeing to read, he certainly has a grievance, t nowadays the likelihood of his obtaining legal redress nd at zero. If, however, the obstruction can be proved have interfered, or to be likely to interfere, to any preciable degree, with his lawful calling, he has still an ellent chance of obtaining an injunction, or damages, both. The law may even compel the aggressor to pull wn or lower the offending building—if, to take a fairly mmon instance, the plaintiff keep a restaurant, and his stomers show a disposition to forsake him because they ject to take nourishment, or to try to read, in a room t a newly erected or further heightened adjacent build- ; has deprived of the quantum of light to which they d been formerly accustomed in the same place. Again, take an equally common ground of action, supposing intercepted daylight is essential to (for example) the tching of colours in fabrics or what not: obviously it is rally unjust to ruin the proprietor of such a business depriving him of the light necessary to its successful rsuit. Such injuries should not be inflicted with imnity.

While, however, it is merely just that no one should be owed to build to another's detriment, it is abundantly dent that the law affecting rights of light, salutary as is when exercised in its purity, is peculiarly liable to ıse, and its abuse is hard to detect. One can often be rally certain that it has occurred, without being able to ablish the fact—the amount and effect of any given tance of light-obstruction being largely a matter of nion. Positive proof of injury being so extremely icult to adduce, proofs that are by no means positive, ept in their hardy assertion, are frequently accepted, on supposition that where the evidence of a platoon of ert witnesses on one side is flatly contradicted with ıal weight, number, and credibility on the other, the judge is in a quandary to determine the issue. He will probably fall back on assumption—that (1) the person who has been at the pains and expense of bringing the matter into court is probably right, if he looks and speaks like an honest man; or that (2) plaintiff does not seem to be acting in good faith, but to be "trying it on"; and the judge may even think it advisable to visit the scene himself and investigate the facts at first hand.

As to the credibility of witnesses in general, and of expert witnesses in particular, your case-hardened judge is apt to be extremely sceptical. They do not wilfully say "the thing which is not," but they make vital mistakes; and if, as a last desperate measure, the perplexed judge resolves to visit the theatre of war personally, he may chance to come back no wiser than he went—may, in fact, arrive at quite erroneous conclusions; and the fact that he has taken such extraordinary pains to misdirect himself is but a poor consolation to the party who loses the case: for he knows that even a learned judge may be occasionally somewhere in the neighbourhood of fallibility, and that his decision after such a visit may have been subject to the day's being exceptionally bright or unusually dull, or to the judge's views being coloured by the state of his digestion.

Whether any given instance of deprivation of light is serious or, on the other hand, insignificant, is in so many instances merely a matter of opinion, so much of a gambling adventure, illustrating in so sensitive a degree the uncertainties of the law, that often the parties on both sides of a doubtful case agree to avoid litigation on so dubious an issue. They may have observed, moreover, that it is an issue on which judicial opinion seems apt to run in grooves or cycles of fat years and lean years. For a considerable period of years an action for infringement of rights of light seemed nearly always to succeed—to be a mere matter of assessing the damages. Then followed a cycle (from which we have not yet emerged) of comparative unsuccess for the claimant, who, though he gain his case, gets but scant profit out of it. Usually the game is not worth the candle. In this respect legal opinion has, during the past decade or so, undergone a remarkable change, leading up, perchance, to the present resolve to get rid of a law that is certainly open to abuse by the unneighbourly, the grasping, the jealous, the litigious, who have commonly regarded it as a handy engine of torture or extortion. On occasions that have been, it is trusted, exceedingly rare, the law as to rights of light has been twisted by litigants in a way that is not easy to distinguish from the levying of blackmail.

In mere fairness to humanity, however, it must be added that nefarious or exaggerated claims are vastly outnumbered by instances in which merely nominal damages, or none at all, have been accepted by building owners whose premises have been perceptibly darkened by the erection of taller adjacent buildings.

It is unsafe to count upon any general extension of such

neighbourly courtesy and kindliness; and on the whole the law as to ancient lights has acted steadily in restraint of trade, many an owner deciding not to build new and higher buildings, or not to increase the height of existing buildings, as the case may be, because of the uncertainty as to whether his enterprise would involve him in litigation that might result in the addition of an inconveniently large sum to that which he was prepared to spend on the actual building; or in litigation that might, if protracted, degenerate into a cruel game of "beggar-my-neighbour."

It cannot be denied that the law as to ancient lights has been always a terrible bugbear to the architect. To have to advise one's client that to enlarge his premises is to run the risk of an action for damages and injunction is not a powerful incentive to building, and many commissions have been lost in the sequel. But, as already urged, there are strong reasons why a building owner or occupier should not be left defenceless against the wrong it is possible to inflict upon him by depriving him of the degree of light t which he is morally entitled, and on which the prosperit of his business may depend. The substitution of artifici light will not always serve. It is at best a costly, and ma be in other respects, an unsatisfactory substitute for th daylight that does not falsify colour-values nor inju eyesight.

Since, then, the rights of light are indeed natural right they should be inalienable. To abolish them would ope the door to much injustice—to the over-riding and bullyin of the tall building, for instance, with which it is sough to Americanize London streets. Yet, the law as it stanc being certainly subject to serious abuse, its reform woul be welcome alike to architect, builder, and client; and w suggest that rights of light should be determined, not b expensive process in general courts of law, but by arbitra tion before a properly constituted tribunal of expert with the R.I.B.A. as its home.

Notes and Comments

The President's Practical Wisdom

At the R.I.B.A. dinner last week the President improved the shining hour with a practical word that we are glad to see has taken wing in the lay Press. Improving on Cæsar's "All Gaul is divided into three parts," the President advanced the proposition that the whole of mankind are divided into three classes—architects, clients, and possible clients. Always the plainest and simplest truths are those that, on enunciation, seem most new and strange to us! It was, no doubt, to the "possible clients" that the President's word of practical advice was chiefly addressed. He questioned their wisdom in awaiting a problematical further fall in cost before releasing money for building. From no point of view is it sound policy to hold up money that could be profitably invested in building, and hence in promoting national prosperity. Editors in the lay Press, recognizing that the President's advice, practical and direct as it was, comprehended far more general interests than those of the architects and builders, have accorded it wide currency. It is at length being realized that building is at the root of business, and that the President's shaft should carry far.

"Knowing a Man by his House"

In a popular London newspaper, a neat little essay begins: "It may seem a little far-fetched to judge a people's characteristics by its architecture. Yet there is a good foundation for it." There is nothing far-fetched in the idea. Architecture that deserves the name is always expressive, to a greater or less degree, of the individuality of the architect, and the individuality of the architect depends on his environment. As the race is, so is the man; and as the man is, so must he build. Even though he imitate with spiritless fidelity the styles of ancient Greece and Rome, or the most authentic models of the Renaissance, there is that within him which forbids his disguising altogether effectually his nationality or even his individuality. These will come through in some more or less subtle way, even as they do in handwriting, which, though it shows no appreciable departure from accepted forms of the alphabet, and is, perhaps, based on earnest attempts to emulate examples in a copy-book, will reveal marked individuality in the writer, in spite of his having played the "sedulous ape" to his model. Even so the architect will certainly impress his character, and incidentally reveal his race, on his building, so that, as Mr. W. J. Locke remarked the other day, the expert in such matters can unerringly attribute, on sight, any building to its architect, providing the building has any character at all, and the architect has any individuality that is at all recognizable. For some buildings, it must be admitted, are "icily regula faultily faultless, splendidly null," and it might be impos sible to say off-hand who designed them—were it not indeed, that the very regularity, faultlessness, and nullity are in themselves marks of individuality, which no two me will exhibit in the same degree and in the same proportion Of late there has been much clamour for the developmen of a national style. Such a demand is foolish and futile A national style cannot be manufactured. It grows not altogether spontaneously, for the soil must be favour able, and the plant must be cultivated. Yet not th character and kind will be thus influenced, but only th strength and vigour, fullness and fruition. The writer fron whom we have quoted—his or her article is signed "H Hill"—lays stress on the solid, workmanlike, and endurin character of British architecture, and claims that thes qualities distinguish the British as a people. It is furthe implied that the British people have no liking for outwar show. It is not difficult to concede the author's point: mos Britons dislike ostentation, and this dislike is expressed i buildings. But the reticence of our buildings come naturally and spontaneously and we have achieved "national style"—or lack of style—without knowing it Pursue a national style, and it will flee from you. Wisely therefore, the architectural schools do not seek a "nationa style." They know that it will come of its own accord— that racial character cannot be by any means suppressed They seek, rather, to become cosmopolitan, knowing tha though it be a natural law that man is the creature of hi environment, yet that environment is restricted neither t the school in which he uses T-square and drawing-board nor to the town nor to the country in which he happens t have been born. These circumstances must, each in it degree, exert a powerful influence upon him; but they wil not determine the essential character of his architecture which will be a select epitome of his preferences derive from the contemplation of the architecture of this or of an other country, of the present or of any other age. And th more cosmopolitan his outlook, the more likely is his worl to be stamped with the impress of his own nationality This is no paradox; for the wider his range of vision, and th broader the field for comparison, the less likely is he to b smitten with calf-love for the architecture of any othe country but his own. A really comprehensive outlook wil certainly give him preferences, but will never induce hin to forsake his character of "True-born Briton" to ape tha of American, Frenchman, Italian. Even if he have a min to become austerely and coldly classical—a twentieth century Cockerell or Greek Thomson—he will find tha birthplace and breeding must be allowed to assert themselve if his work is to be kept on the hither side of tameness an

insipidity. Indeed, they will assert themselves in any case. They are in the blood, and cannot be put off like a garment, any more than a foreign style can be put on with the same facility. Breadth of study, facilities for travel, will not destroy his native genius. Certainly they will modify it. That is the object of culture and training—to rub off the mere rust of rusticity, and to impart polish to the metal beneath. But his modesty will remain to him. As the man, so the building.

Art and Letters

To most architects lettering is of perennial interest. It is, in a manner, a subsidiary part of their art, and certainly they are among its most critical connoisseurs and are often fine exponents of it. They will have been delighted, therefore, with the fine supplement on "Printing" issued with "The Manchester Guardian" on May 23. In itself a fine example of superior printing, the supplement is further valuable in recording, succinctly, but with scholarly fidelity, the rise and progress of typography. It demonstrates conclusively in a selection of beautiful examples the persuasive power of good lettering well displayed, whether it adorns a title-page or lends attractive emphasis to a business announcement. Of the many examples of lettering illustrated, nearly all reflect the beautiful simplicity and supreme legibility of the fine "Old Face Roman," designed by William Caslon in the eighteenth century. We congratulate "The Manchester Guardian" on its enterprising encouragement of good printing, which, though one of the minor arts or crafts, is, like building, fraught with much power to disseminate taste and promote prosperity. One of the most eminent of eighteenth-century printers, William Bowyer, delighted to call himself "Architectus Verborum," and really his ambition was not utterly devoid of excuse.

The Melbourne War Memorial

With respect to the war memorial which Australia proposes to erect at the cost of £250,000 in Melbourne, Mr. Herbert Hampton has a timely letter of protest in "The Times." It had been announced that "artists, architects, and others who, in the opinion of the committee of adjudication, are Australians, although living abroad, or British subjects residing in Australia, will be eligible to compete," and that inferentially all others will be excluded. Consequently, Mr. Hampton, as a Briton who happens to reside elsewhere than in Australia, feels aggrieved. He has our sympathy. So have all British artists who suffer innocently for the same disqualification. They who are most in need of that sympathy, however, are the Australians themselves, who are likely to suffer most poignantly, if not most permanently, from this excess of patriotism. The Australians seem fated to make ghastly mistakes in the management of their competitions. Canberra clings to the memory like a burr. Mr. Hampton barbs his protest with: "I venture to point out to Australians that we have never failed to give Colonial artists the heartiest welcome, personal and competitive, and some have attained great success here and in their colony." Mr. Bertram Mackennal could confirm this, and as there is no question that a wide and liberal outlook is on all grounds the wisest as well as the most dignified possible policy for art, it is indeed surprising that Australians should act as if they held the contrary view.

Beautiful London

At the R.I.B.A. dinner last week Sir Alfred Hopkinson, K.C., who was present as a guest, said a very daring thing. Having just returned from abroad, he said, he was realizing what a beautiful city London is. He appeared to be very sincere in the eulogy. Every Londoner believes in its truth, and is really proud of London, even when he follows the common and rather foolish fashion of affecting to despise it. After making every allowance for the fact that Sir Alfred was paying a graceful compliment to some of the most eminent of the makers of modern London, many of whom were eagerly imbibing the fine wine of praise that he poured out for them, we cannot think that he greatly exaggerated the case for our metropolis. Beautiful it is in very truth, and if Londoners are wise they will take this praise to heart and endeavour to live up to it—make its streets tidy, rescue its beautiful buildings from the smoke-fiend, and stand firm against all the efforts of the profiteers to Americanize it, with demi-semi skyscrapers as a first instalment towards its ultimate utter degradation.

A BRITISH CEMETERY AT CALAIS SUD.

RECORD HOUSES DESIGNED BY MR. HERBERT BAKER, F.R.I.B.A., AND THE GREAT WAR CROSS BY SIR REGINALD BLOMFIELD, R.A.

(*See following pages.*)

The British Cemeteries in France and Belgium

MANY of the British cemeteries in Northern France and Belgium have had to be built in the very heart of the devastated regions, miles from any villages, except those which lie in ruins. Often they are situated in the centre of a shell-pitted and water-logged field, where roads have had to be built for the conveyance of materials, and temporary huts and canteens erected for the use of large numbers of workmen. This has necessitated a good deal of reorganization. A complete system of motor transport has been organized, and over one hundred separate offices have been opened for the collection of materials and the engaging of workmen.

The work generally consisted of levelling and terracing the ground round the existing graves, the construction of stone retaining walls, with necessary moulded stone copings, quoins, etc., ornamental entrances and gates, and the erection in the main cemeteries of chapels and record houses, such as are illustrated in this issue. At each cemetery there is erected on a raised terrace the Great War Stone, exactly similar to that which the King unveiled on May 13. Facing this Great War Stone, and generally on the opposite side of the cemetery, is erected the Great War Cross, illustrated on page 770. Each grave had originally a small wooden cross at its head. One of the first operations in the construction of the work consisted of moving these crosses from the head to the feet of the graves. A continuous reinforced concrete beam slotted to receive the headstones was then constructed, so that when the approved headstones were fixed there could be no movement or settlement of the headstones.

The number of cemeteries at present in course of construction is approximately 110, these varying from small ones containing fifty or sixty graves to those such as Etaples and Lissenthoek, each containing over 10,000 graves. One of the difficulties the contractors had to contend with was the supply of the necessary stonework, of which over 250,000 cubic feet had to be quarried and worked. A curious position arose from the fact tha although the whole of this stone (with the exception the headstones, which came entirely from Great Britai was found in French quarries, owing to there being n sufficiently large stone-working yards in France the ston had to be transported in the raw state from France t Brussels, and there worked up into the form of crosse war stones, walling, etc., and then brought back to Franc for fixing. The following figures will give some idea of th work that has been completed on these cemeteries withi the last eighteen months :—

95 Great War Crosses have been fixed,
56 Great War Stones have been placed in position,
8 Chapels and
20 Record houses have been built.
92,000 Headstones have been received from England an erected in position in the headstone beams the various cemeteries, the total length of th headstone beams actually constructed no amounting to 36 miles.
250,000 cubic feet of stone has been quarried, worked, an built in position.
27,000 yards cube of concrete has been placed, an several millions of special bricks built into th walling.
40,000 yards cube of excavation has been handled in th levelling, terracing, and banking, many sleep roads have been constructed, and hundreds men have been transported, housed, and fed.

The whole of the work has been carried out under th supervision of the Imperial War Graves Commission. Th cemeteries themselves have been carried out to the desig of Sir Edwin Lutyens, Sir Reginald Blomfield, Mr. Herbe Baker, and Major Holden.

The contractors for practically the whole of this wo are D. G. Somerville & Co., Ltd., of London, together wi their associated firm, the Entreprises Somerville, Socié Anonyme, Paris.

GREAT WAR CROSS IN LONGPRÉ CEMETERY. DESIGNED BY SIR REGINALD BLOMFIELD, R.A., F.R.I.B.A.

Herbert Baker, F.R.I.B.A., Architect

This illustration shows a typical British Military Cemetery in Northern France. The two simple little pavilions are record houses, and between them stands the Great War Stone. The headstones are fixed in a continuous reinforced concrete beam to avoid movement or settlement.

Mr. Hilaire Belloc on Architecture and the Decline in our Civilization

[T was a great pleasure to see and hear Mr. Belloc at the Architectural Association. In that crowded long room in Bedford Square, on a night too warm for comfortable speaking, one was happy indeed to ıd in his words and in the manner of their delivery that ıme strength and conviction (some would call it assertion) hich so distinguishes his writings. Moreover, there was ıat same theme which underlies all his work, whether ɔeaking or writing: That when a society is so apathetic ; to allow itself to be governed by wealth and power which ·e either ill-gained or accidental, then that society is ıhealthy.

"We can't find the right men for the right jobs," he said the course of his address. He has long been saying it. e is a great man among us. It is characteristic of our ːople to be distrustful of ver- tility. We will never admit at immortal man in all his mplexity is great enough to ıcompass more than one form activity. We will force a an into a groove, and so ng as he remains in that oove we will listen to him. ıis may be a safe rule, but is foolish to apply such ean standards to the whole of ankind. Paderewski and 'Annunzio are to us incom- ehensible, and had Leonardo ı Vinci lived to-day he ɔuld have been dubbed Jack all trades and master of ne, or else condemned to ːint "Mona Lisas" (or ıichever was his most popu- r picture) for the rest of his e.

Mr. Belloc's versatility has ken him through all forms writing with success; from story to travel, and from tirical verse to great poetry. has taken him into the ɔuse of Commons itself, and ought him out again a ɪtle cynical, but unhurt. In all his departments of ɪiting he has excelled; and what is more, he still ɾcels. He is not a man who has gone on from one ːpect of literature to another as though he were ex- rimenting with a new thing and did not care to return it again. Like the goddess, he was born fully armed; ıe many-sided power is always with him, and he could ɪt throw it off if he would. Yet he is consistent rough all his means of expression. Whether he is writing lecturing, or whether one marches with him over the ːps, or finds oneself discreetly introduced into that great ːiety of the cultured which governs England, one sees that ɑıtral idea of his, his desire to call men away from the se values of fortuitous wealth and position to the simple d fundamental things of life, the green fields and the ɜad and wine of the soil.

One would like to quote at great length from work, but it should be too well known to need ɑmples. In poetry, for instance, there are few things finer than that song from "The Four Men," which begins:

I shall go without companions,
And with nothing in my hand;
I shall pass through many places that
I cannot understand
Until I come to my own country,
Which is a pleasant land.

There is that delightful poem at the beginning of "Every Bad Child's Book of Beasts," in which he bids the child to pray for its parents "Who have lost their fairylands."

His essays, all of them delightful, are distinguished by that ease and beauty of English which makes us love our mother tongue.

MR. HILAIRE BELLOC AT THE A.A.

This is from "London and the Houses in it": "And it would seem as though London was only London because of these rough surfaces of soft stonework, streaked with white wedges, scaling off the grime of St. Martin's or St. Clement Danes, or the fine front of the Admiralty, and standing out clear against the general mass of the streets. The quite new things have no character at all. One wonders what cosmopolitan need can have produced them. London never produced them, with their stone that so often is plaster, and their alien suggestion of whatever is least national in Paris or New York. London never produced them."

This is from "The Path to Rome": "Little friend, how little you know! To a building windows are everything. They are what eyes are to a man. Out of windows a building takes its view; in windows the outlook of its human inhabitants is framed. If you were the lord of a very high tower overlooking a town, a plain, a river, and a distant hill (I doubt if you will ever have such luck!), would you not call your architect up before you and say: 'Sir, see that the windows of my house are *tall, narrow, thick,* and have *a round top to them*'?"

It is in the difficult art of satire that he most excels. That delightful art which but for him would have been left behind in the eighteenth century. This description of Mr. Clutterbuck's new house will serve as an example of his style:—

"Deep in the Surrey hills, and long secluded from the world, there runs a drowsy valley known to the rustics whom it nurtures as the Vale of Caterham. . . . Here it was that Mr. Clutterbuck was building the new home. The house itself had been raised with business-like rapidity under the directions of Mrs. Clutterbuck herself, who had the wisdom to employ in all but the smaller details an architect recommended by the Rev. Isaac Fowle.

"The whole was in the taste which the sound domestic sense of modern England had substituted for the gloomy

stucco and false Italian loggias of our fathers. The first story was of red brick, which time would mellow to a glorious and harmonious colour; the second was covered with rough-cast, while the third and fourth appeared as dormer windows in an ample roof containing no less than fifteen gables. The chimneys were astonishingly perfect examples of Somersetshire heading, and the woodwork, which was applied in thin strips outside the main walls of the building, was designed in the Cheshire fashion, with draw-pins, tholes and spring-heads, unctured to a sober brown. The oak was imported from the distant Baltic, and strengthened with iron as a precaution against the gape and the warp."

How fluent! But the sting is there—it is never lost although it is often so gentle.

Mr. Belloc said that he could not approach a subject like "The Probable Effect on Architecture of the Decline in our Civilization" from a technical knowledge of values in architecture. He could only claim from his knowledge of history to give a few directing lines where they had occurred to him, of how the march of civilization in the past had acted, and in the future would act, on those arts which were common to mankind. Talking of the future one was always wrong. One could only observe the forces at work before one's eyes, and hazard a guess where they tended, for accident would come in as a factor greater than them all.

It would seem as if he necessarily postulated that there was a decline in our civilization. This was not so. He himself happened to think that the civilization of Europe, and of England in particular, had already begun to decline. But that particular premise was not necessary to what he had to say. He was only going to speak of what would happen to architecture if ever a decline in our civilization came to pass.

They must not go away in the belief that because a country's material position was satisfactory, it was not already on the down grade. England's material position was greater than it ever had been before; its production was not less, it was more. It was in progress of knowledge which lay behind production that England was lapsing.

When he was in the House of Commons (a period he liked to refer to) there was a well-known member there whose favourite remark was, "What makes a nation great?" He would answer the question himself—"Coal." He was wrong. It was not coal; it was the spirit, the driving force, which made them use it and develop it to the needs of mankind.

Decline took place not through poverty, but through a change in the mind. The mind of Europe was undergoing a great and deep change; it was suffering from fatigue. In all things the mind was like the body, and its symptoms of good and bad condition were the same. It had its impulses of great activity and its lapses into fatigue. It was a characteristic of the healthy body that it judged what was best for it, that it could get the best for its own subsistence from its environment. The decline set in with a gradual loss of that faculty. There was no greater social sign of decay in a State than when it could not choose the right men for the right jobs. The mind had become flabby and listless; it was apathetic to those things which should concern it most. There was no greater symptom than that inability to choose leaders.

It was a common experience in these days to meet from time to time in simple circumstances a man fitted by brain and character to lead a people, and it was, too, a common experience on meeting the men talked about—the so-called great men—to find that they were complete fools. These symptoms spoke for themselves, and were increasing with immense rapidity all over Europe, but they were much more evident in England than anywhere else. Therefore he suggested that the mind of our civilization was declining, and although the actual material evidences of that would come long after we were dead, it was his business that evening to discuss what would be the effect on various forms of human energy of that decline, and particularly on architecture; not with any knowledge of that science, but with the knowledge of what man had done in the past when those signs became evident.

"The Human Relationship."

From the year 280, when the Romans left Britain, to the year 1000, there was a long and continuous decline in civilization. It was wrong to take this period as an exact analogy with our own time, but even archæologically the parallel was worth study. What was likely to happen? What happened to architecture when the mind began to get weak and the soul fatigued? At first neither materials were affected, nor learning, for that was the most lasting of all things. No, the first warning was that the nerve went wrong; appreciation went, and a just sense of proportion.

It was wrong to say, "That is beautiful," as if it were an end in itself. The creative power to make the beautiful was the thing that mattered. It was the power of projecting human personality into lifeless things, and retaining it there as a living thing, that made architecture.

The Parthenon was not dead, but a neo-Greek building was lifeless. The one was a few derelict columns pulsating with life, the other was a face on which the Holy Spirit had never breathed. It was that quality of human appeal which architects were losing. When trying to get effects of height, distance, cosiness, magnificence, they had become afraid and out of focus. The nave of Beauvais had more the effect of height than any building, yet it was not very high. The immense Arc de Triomphe could be put under the foot arches of the Eiffel Tower. But that effect of immensity, of magnificence in scale (not in decoration), nowadays did not come off. There was a basilica in a town to the south of Ancona which was grand; it was quite small, and yet Liverpool Cathedral had not the same effect.

That quality of cosiness and domesticity, too, which was so much a part of the Northern character was not found in much of its modern architecture. To-day the houses were built in the fashion of an olden time; they were clothed without in a number of conventions, and within in oak panelling which was shot at with guns in order to make upon its surface an infinite number of little holes. The house was not home; it was something to look at, and not live in. You went into a house as you would into an hotel, not prepared to remain. That was not a matter of age, it was something else. To-day there was no sense of true satisfaction in a building—which brought the speaker to his next point.

Proportion.

A just sense of proportion gave satisfaction in a building more than anything else, and it was the ability to appreciate proportion which distinguished a cultured society. That was something which we should lose, if indeed we had not already lost it. The ways of good proportion were things which we should not understand. Architects would lose their creative power, and the little they knew about the past would be served up again and again until even that was lost. Having lost their sense of values, they would lose their sense of materials. Irak in the same way had lost the small dome which convention gave it for centuries; gradually the form and the construction had disappeared.

Materials.

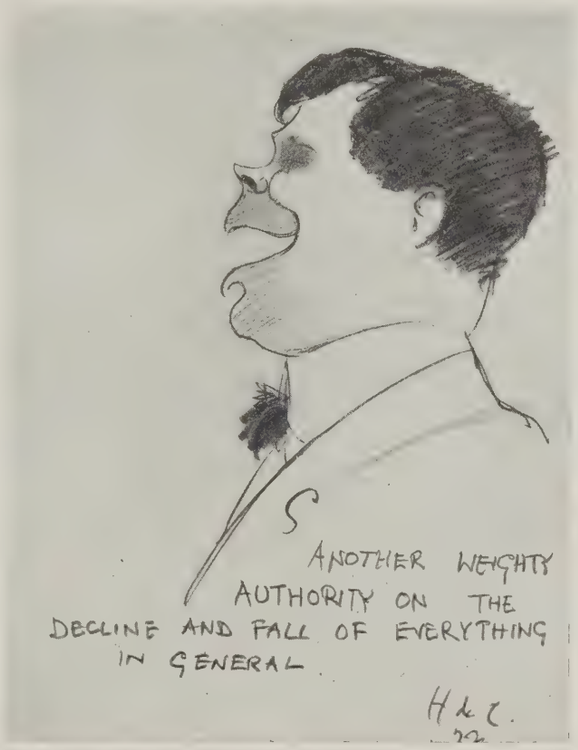
Another sign would be an exaggeration in size of buildings as a primitive method of giving the effect of grandeur. Fullest advantage would be taken of modern scientific methods to obtain excess in size; the swollen effect. Buildings would be made to frighten rather than please, and the cult of the ugly would come in; not the cult of the grotesque, but of the horribly ugly. Just as one who

could not cook would disguise his ineptitude by adding hot mustards and spices to the meal, and as a musician who knew little music would throw in discords to attract attention, so would the architect endeavour to frighten and confuse the mind of the beholder. This had already happened. For in the town of Strasburg they had done a number of strange things, and in the town of Metz, which was more unguarded, they had put up the most amazing atrocities. He was not an architect, and could not tell where they were wrong except that everything was wrong; not only the architecture, but the sculpture. He was able to give one instance from Metz, however. In that town there was a certain group of statuary in which Daniel was depicted as one of the figures. It was almost incredible, but the Germans had actually represented Daniel as the ex-Kaiser with upturned moustaches.

Mr. Hilaire Belloc continued further as to the reaction of decline on materials. He said during the Roman decline concrete took the form of the arch. But as the decline continued the Romans lost the concrete and kept the arch. Why was that. It was because the difficulties of cement and concrete were too much for them. They lost the mastery of their materials. In the same way he imagined that we in the future would not make the best use of our modern materials of steel and concrete. The steel would be badly made, the concrete would be carelessly mixed; we would become generally lazy and timorous, and in consequence lose gradually all command over our materials

Snobbishness.

The speaker's third point was that the element of snobbishness would develop in architecture. It was the mark of decline in a society when the rich governed it; and architecture would tend to become an architecture for rich men. Then, peering into the distant future, he foreshadowed great plagues, and great wars, and London a city of streets without pavements. Probably, he said, many hundreds of years hence we should go back to the simplest upright with something across it to keep up the floors.



MR. H. B. CRESWELL.

Discussion

Mr. Philip Tilden, in moving the vote of thanks, said that he had a suspicion that Mr. Belloc knew more of architecture than he said. As to materials, architects were settling down to steel and concrete and beginning to understand them better, and whereas the decline of Rome was marked by going to the ornate, there was a tendecy in this country at least towards simplicity. It could hardly be said, he went on, that a decline in our civilization had begun in the early years of the reign of Queen Victoria, yet it was then that the sense of proportion was lost. If Mr. Belloc gave the loss of sense of proportion as a symptom of National decay, he must, *ipso facto*, admit that decay had set in with the Victorian era. For his part, he attributed the loss in the sense of proportion to the extraordinary prosperity, out of all proportion, which existed then.

Mr. Creswell said that he always had thought that architects were left too much to simmer amongst themselves. They did not get sufficiently outside their own parochial atmosphere. He always found it profitable to read books on architectural subjects which were not written by architects; there were the books of March Phillipps and Lord Grimthorpe, for instance. Mr. Belloc was a man of most extraordinary versatility, whose mind had ranged over many subjects, and whose knowledge of the world was considerable; and when a man like Mr. Belloc said that he saw a decline he could not try to cheer him up as the last speaker did; rather he would entirely agree with him. It seemed to him that decline in architecture came hand in hand with insincerity of life. Architecture could not live surrounded by insincerity, the materialistic, and the commercial. When he came to London some years ago the idea of a publisher then was to publish good books. Now his idea was to publish best sellers. Then newspapers had pride and dignity, now they trafficked in ignorance and vulgarity, reproducing consistently the female leg as if it were something new. This was the modern world. The keynote of it all might be summed up in the word "Pretentiousness." Architects could do much to arrest the decay of building-craft by employing, wherever possible, the men who work as individualists.

Mr. W. A. Devereux said that, speaking as a student, and as one on the behalf of students, he chose to think that architecture, far from being on the downward grade, was in the first flush of youth, that it was entering upon a new lease of life.

Mr. Philip Tilden asked to what extent beauty would react upon the decline in civilization.

Mr. Belloc: "The reaction of beauty on civilization is not sufficient."

Mr. Philip Tilden: "Not if Literature helps?"

Mr. Belloc: "No. Beauty is an effect, not a cause—an effect of a *healthy civilization.*"

Mr. W. G. Newton said that they were glad and proud to have Mr. Belloc with them that evening; his writings had moved them all; they had, in fact, moved the speaker across the Pyrenees in search of a little republic. The questions they would like to put to Mr. Belloc were, firstly: Did he think that architecture at present was showing signs of decline? And, secondly: Could anything that we do arrest this decline?

Mr. Belloc, in reply, said that as to whether he thought architecture at present showed signs of decline, the answer was "No." He thought it was having a spurt, but he did not think that it would go on. Invariably when the wrong men were powerful in a country the decline had set in. Could the artist react against that? The artist could react to only a very small extent. Beauty was an effect, and not a cause. That being so, one had to consider whether it was a good or bad thing for men to do their best work when the tendency about them was to the bad.

Mr. Belloc concluded as follows: "As between the moods of optimism and what is called pessimism, choose the latter, for in that men do their best work. By saying "what fine fellows we are" we produce the "Idylls of the King." But Tennyson at the age of twenty (when he was unknown and found it difficult to write) was writing true

poetry. The moment when the individual does his best work is when he is down and out and things are going against the tide.

Further, I will give you four reasons why it is worth while going on.

1. We are the Sons of God.

2. Because nobody knows what is coming. Only to-day I received unexpectedly a cheque for £48 5s. in respect of six months' sales of a book.

3. That by the accumulation of what is well done a current of good is created, and one never knows where it will end. It may end in another great forward tendency.

4. Because all this about a declining civilization is so much talk, and is of no value whatever unless it dissatisfies us, and spurs us on to action—to create Beauty and Truth which are not only good in the doing, but are the worship of Almighty God.

F. E. T.

The All-England Lawn Tennis Ground, Wimbledon

CAPTAIN C. STANLEY PEACH, F.R.I.B.A., Architect

RAPID progress has been made with the new All-England Lawn Tennis Club Ground, at Wimbledon Park, since the work was put in hand in September last; and though a good deal remains to be done before the place is finally completed, there is no doubt that it will be sufficiently advanced for the championship tournament to be held there in July.

The chief feature of interest at the ground is the "centre court stand," as it is rather inadequately described—a better term would be "central arena," for such it really is, with its fourteen thousand seats piled tier on tier in the manner of a Roman amphitheatre. Indeed, though polygonal on plan, and of a severely simple form of reinforced concrete construction, the "stand" has many points in common with the Colosseum. There are the deep recesses of the understructure, with their stairways leading up to the different levels, and debouching here and there among the massed array of seats. True, the "arena" is simply a rectangle of vividly green turf, but it is no less the centre of intense interest than was that other arena whose terrors provided the sport of an ancient Roman holiday.

We believe we are right in saying that this tennis "court" is unique of its kind—there is nothing to match it in Europe or in the United States; and it does much credit to the All-England Club that they had the good sense to engage the services of an accomplished architect for the work. Captain Stanley Peach, F.R.I.B.A., is to be equally congratulated on the successful solution of an extremely difficult problem.

The ground is situated in a very picturesque position on the Wimbledon Park Road, facing the golf links, and overlooking the lake in Wimbledon Park. The site, which comprises an area of about 13½ acres, slopes from north-west to south-east, and the fall of the ground from one corner to the other is over 30 ft.

The preparation of the ground started towards the end of May 1921, with the construction of two main roads, each 27 ft. wide and 216 yards long, across the site from east to west.

There are fifteen grass courts in addition to the centre court, making sixteen in all, and nine hard courts, in addition to the championship hard court, making ten in all. The centre court stand, which has a seating capacity for ten thousand persons, and standing room for some four thousand more, is a dodecagon on plan, the long axis being 297 ft. 6 in., and the shorter 277 ft. 6 in. The grass-centre court is 175 ft. 6 in. long and 92 ft. wide, and on each side are open stands with seats for about 1,000 persons. The main structure of the stand, the supporting members, the steppings and tiers, are of reinforced concrete, the roof being a steel frame on stanchions 40 ft. centres, and covered with corrugated iron.

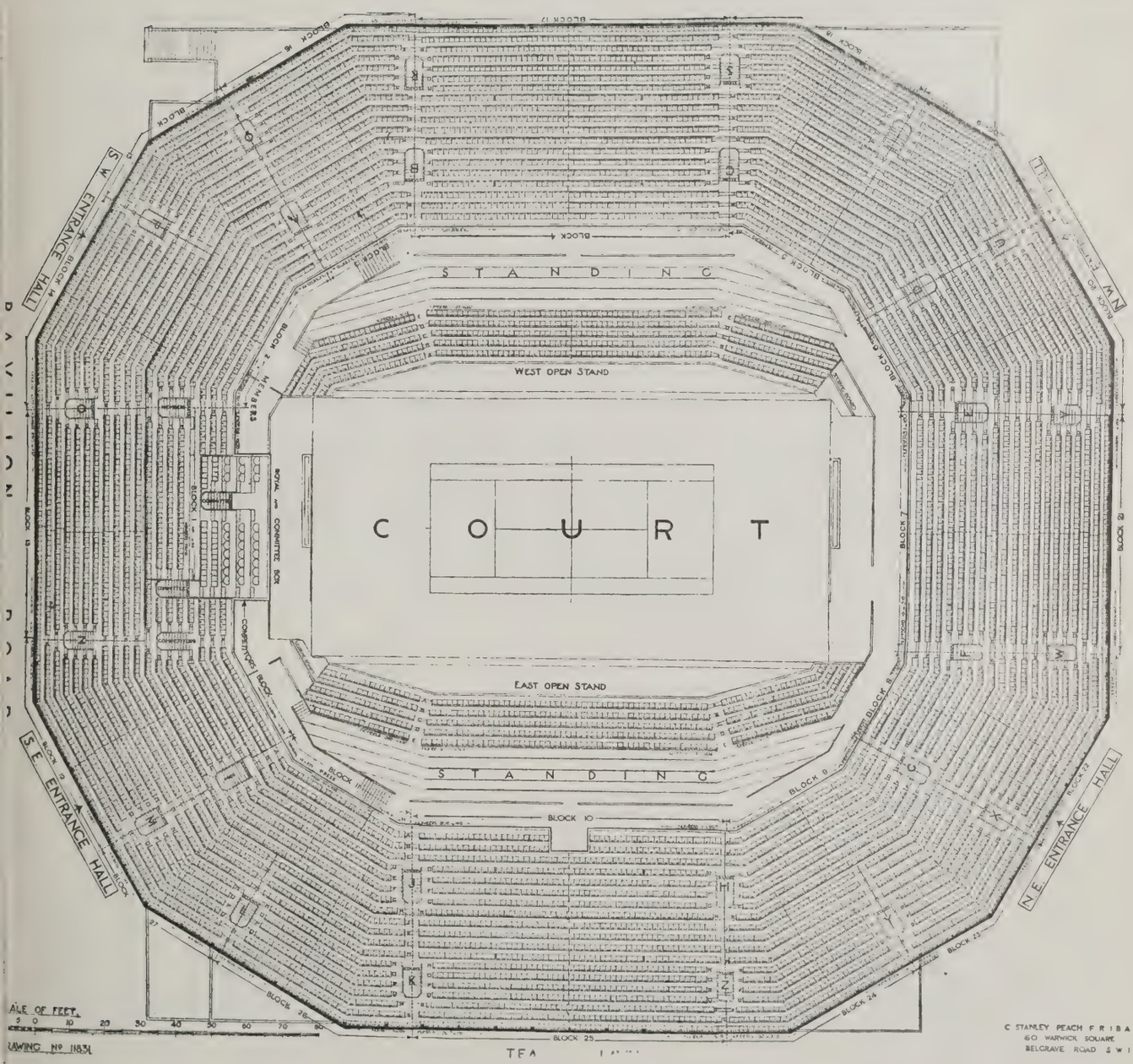
The entrances to the stand are from the five halls, two being situated on the south road and three on the north road. The north hall, central on the north front, is 180 ft. by 30 ft., and the other four, each 40 ft. by 32 ft., are placed at the corners of the building. Access to the upper tiers of seats is by staircases on the right and left of the entrance halls. The Royal entrance and the entrances for members of the club, committee, competitors, and officials are central on the south block.

The offices for the secretary and the referee are on the ground floor to left and right on the south entrance, and the members' rooms, committee rooms, and Royal rooms are on the first floor overlooking the courts. The ladies' and gentlemen's dressing-rooms are on the ground floor, and there is an additional ladies' dressing-room for the championship meeting only on the lower ground floor.

The tea-room, which is 150 ft. by 56 ft., is placed under the steppings, and occupies the whole east side, with a paved terrace the full length, 25 ft. wide, at ground level. In front is the tea-lawn, 300 ft. by 150 ft. The caterers' department adjacent to the tea-room is situated at a slightly lower level, the service being at the same level and along the side of the tea-room and next to the gangway of the centre court.

There are nineteen tiers of seats in the covered part of the stand, the seating being divided into twenty-eight

GENERAL VIEW OF THE ARENA IN COURSE OF CONSTRUCTION.



THE ALL-ENGLAND LAWN TENNIS STAND, WIMBLEDON: PERSPECTIVE AND PLAN.
CAPTAIN C. STANLEY PEACH, F.R.I.B.A., ARCHITECT.

blocks, each served by two staircases, one half from the upper gangway, which forms a balcony overlooking the grounds, and the other half from the lower gangway. These gangways are continuous under the tiers, and connect all the halls.

The championship hard court will be placed to the west of the centre court stand, the seats on the eastern side being under the tiers of the centre court stand, and reached by the same entrances and gangways which serve the grass court stand.

Considering the size of the building, the amount of work involved, and the necessity for taking down the foundations to a considerable depth, the site being yellow London clay, the work has gone ahead very rapidly for a post-war structure. The principal barriers and resters, the balustrading of the staircases and of the various balconies, are all in reinforced concrete, and designed to emphasize the actual construction used. They are partly precast and partly *in situ* reinforced concrete.

The building is a somewhat remarkable instance of the rapidity of construction which can be attained by the use of standard dimensions and a standardized system of construction when there is sufficient space for making the precast concrete on the site, as was done in this case. The whole of the risers of the tiers, some three miles in all, were precast. The treads, however, were cast *in situ* with a view to binding the whole structure together.

The main stand has four rings of columns, those in the third ring (counting from the outside) being at 10 ft. and 20 ft. centres. These columns are connected by main beams which carry the raker beams spaced at 10 ft. centres. Exits from the steppings connect with galleries at their respective levels. The upper gallery is of rather unusual construction, being supported on the inside by hangers which transmit the load to the raking beams above.

Practically all the elevations, with the exception of the structural members and the ornamental balustrading, are formed of 2 in. Portland cement plaster on Hy-Rib, attachments for fixing the Hy-Rib having been fitted in the structural members before they were cast. The precast ornamental balustrading goes completely round the inner ring of the stand, forming a balustrading overlooking the centre court and the open steppings. A similar design, but of larger section, has been used to form the balustrading to the upper gallery. The four rows of steppings next the centre court are constructed on the solid ground.

The distance round the outer row of seats on the stand is nearly a quarter of a mile, and there are over three miles of seats, whilst the complete stand is larger than the Albert Hall. Before the wooden seats were fixed into position a test was made of a portion of the west bay, workmen employed by the contractors being used to provide the "live" load. The test was undoubtedly a severe one, as it will be impossible under working conditions to get the stand so crowded and for the crowd to move so quickly. The deflections obtained were very small, approaching something like $\frac{1}{200}$th inch.

The construction of the roof over the stand consists of steel stanchions, fifty in number, supporting two complete rings of intermediate lattice girders, and one ring of rolled steel joists on the outside, the latter being bolted down to reinforced concrete columns.

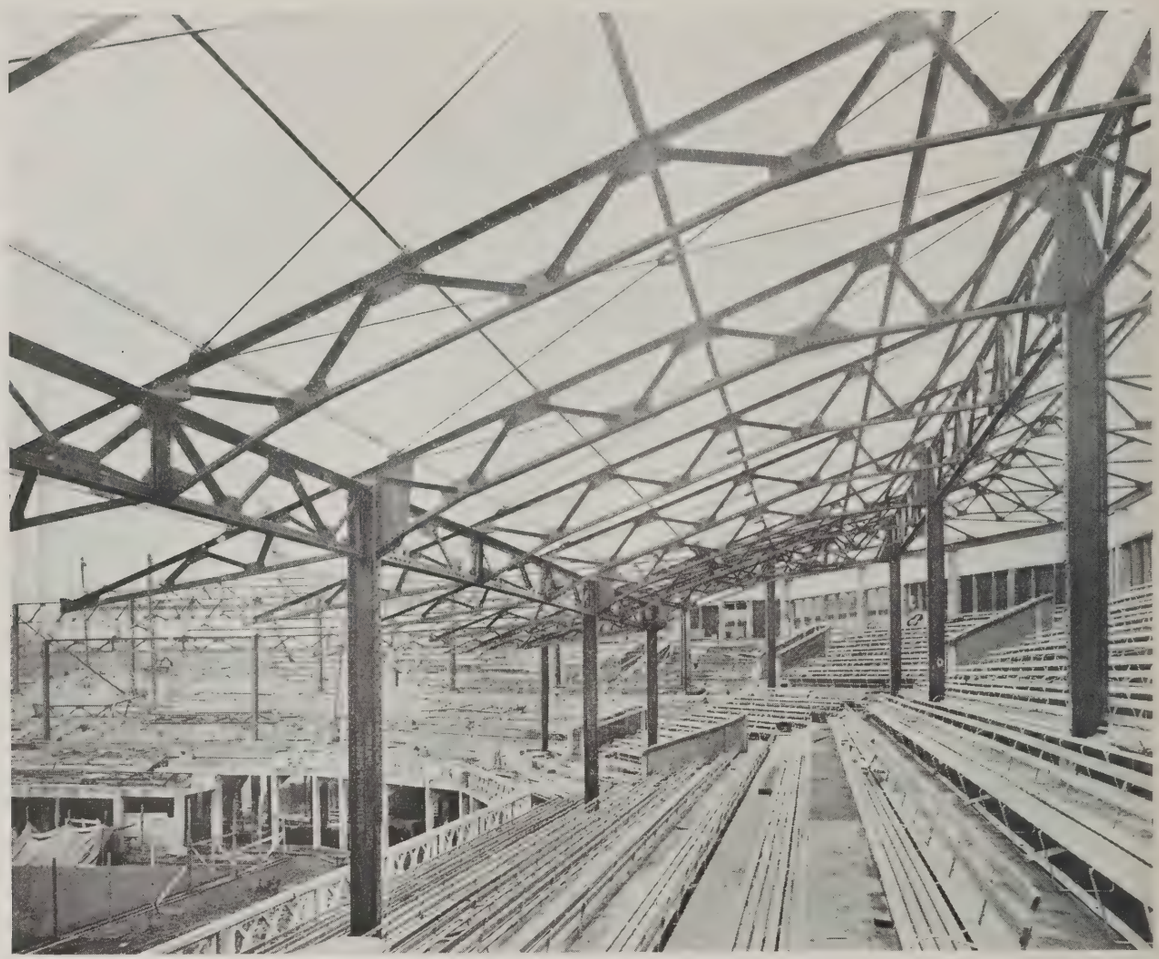
Radiating from approximately the centre of the court are trusses about 20 ft. span at the highest point of the roof, with an equal slope of 20 degrees on each side, and a ridge in the centre of the space from the outer joist ring to the outer of the two middle rings of the lattice girders, the trusses being continued downward at the same slope towards the middle of the court, in the form of lattice girders about 24 ft. span, to the inner ring, and cantilevering out beyond about 12 ft., giving a covering all round for a width of 56 ft. This framework is efficiently braced to withstand a horizontal wind-pressure of 30 lb. per square foot. The actual roof covering is galvanized corrugated steel sheeting, bolted down to purlins of 4 in. by 3 in. angle section, spaced about 6 ft. apart, parallel to the main lattice girder rings, and connected to the top of the radiating trusses and lattice girders. The ridge is formed as a ventilator. At one end, over the Royal Box, the roof extends about 10 ft. in front of the general line for a width of 40 ft. Galvanized pressed steel gutters are provided all round the outside and inside, with galvanized steel fascia plates bolted to the shoes of the trusses. The rainwater is carried down to the ground by cast-iron pipes of large diameter. The stanchions are held down securely by bolts to the reinforced concrete beams forming the

DETAIL OF SOUTH-WEST ENTRANCE.

PLACING THE PRE-CAST CONCRETE RISERS IN POSITION.

VIEW OF UNDERSTRUCTURE.

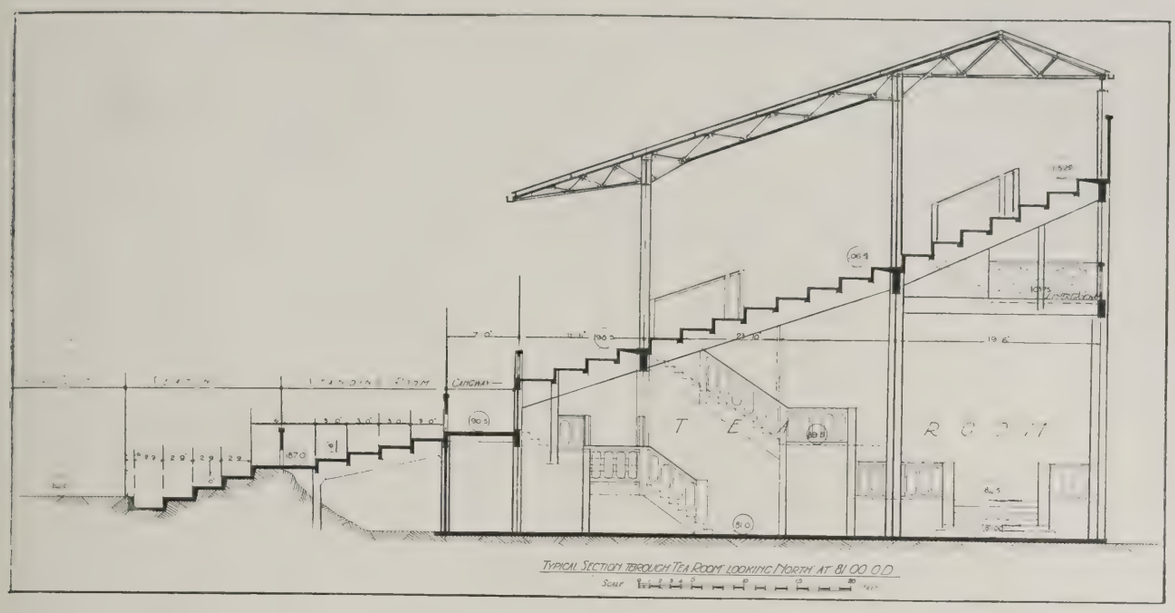
THE CENTRE COURT STAND AT THE NEW "WIMBLEDON.



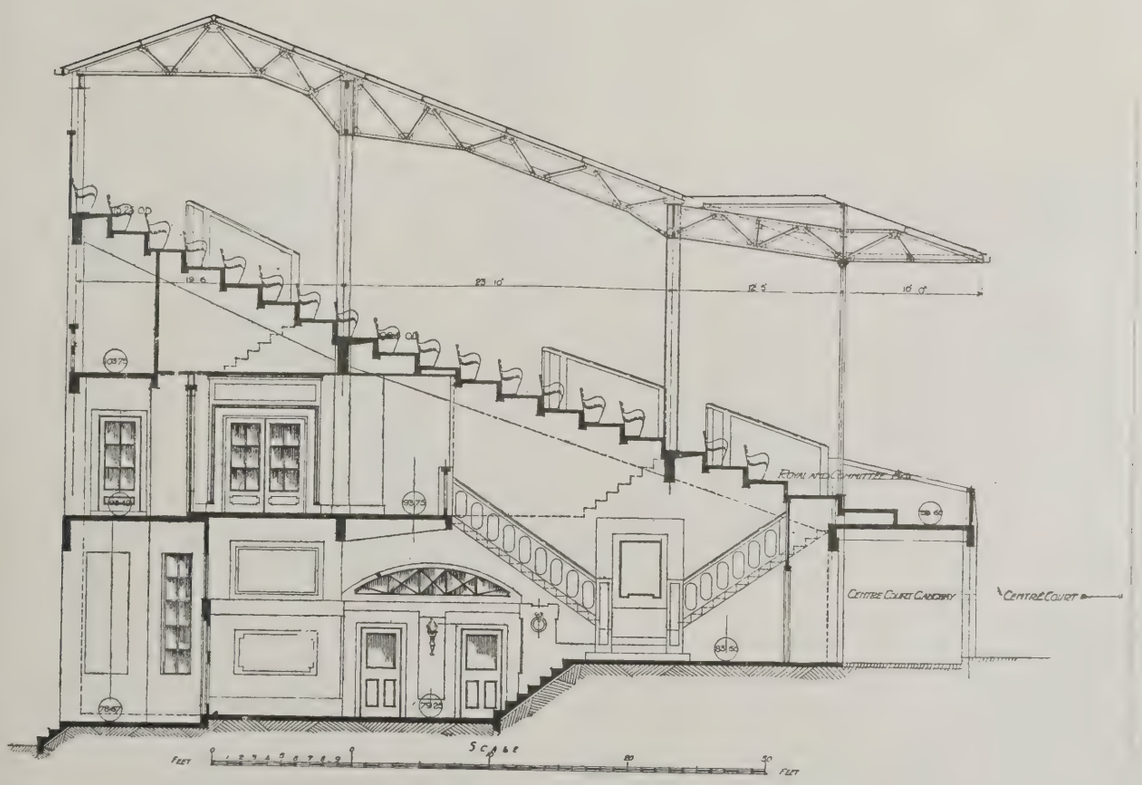
DETAIL OF STEEL ROOF TRUSSES.

VIEW OF ARENA WITH STEEL ROOFING PARTLY ERECTED.

THE ALL-ENGLAND LAWN TENNIS STAND, WIMBLEDON. CAPTAIN C. STANLEY PEACH, F.R.I.B.A., ARCHITECT.



TYPICAL SECTION THROUGH TEA ROOM LOOKING NORTH AT 81'00 O.D.



TRANSVERSE SECTION ON CENTRE LINE OF ROYAL AND COMMITTEE ENTRANCE, PAVILION ROAD LOOKING WEST.

THE ALL-ENGLAND LAWN TENNIS STAND, WIMBLEDON: SECTIONS.
CAPTAIN C. STANLEY PEACH, F.R.I.B.A., ARCHITECT.

stand proper. The total weight of steelwork amounts to 173 tons, and the total weight of corrugated sheeting is 64 tons.

The steelwork of the roof was carried out by Messrs. Archibald D. Dawnay and Sons, Ltd.

The roof is being painted a dark green colour to prevent any chance of glare from the roof affecting the light in the centre court. The painting is being very rapidly carried out by the Aerograph Company.

Messrs. Stuarts Granolithic Co., Ltd., are the contractors for the reinforced concrete, which is designed on the principle of the Trussed Concrete Steel Co., Ltd., who have acted as reinforced concrete engineers for the building.

of the site, which was carried out by Messrs. Mullen and Lumsden) was executed by Messrs. Davis Bennett & Co., who also supplied the sanitary fittings.

The electric wiring is on the "Stannos" system, Messrs. Siemens Bros. & Co., Ltd., acting as consulting engineers, and the work being executed by Messrs. Rawlings Bros., Ltd. The portion being lit covers the Royal entrance, reception rooms and offices. The wiring is run on the surface of the walls, and although the work is exposed, the method of installation is such that the wire is practically unnoticeable. The fixing of the wire is by means of special clips in conjunction with Rawlplugs.

COMBINED WATER AND CLOCK TOWER AT THE NEW "WIMBLEDON."

Messrs. Mullen and Lumsden, Ltd., are the contractors for the roads and the general formation of the grounds, but the courts themselves have been laid out by Commander Hillyard with the staff of the All-England Lawn Tennis Club.

The paving of the paths was executed by Messrs. Mullen and Lumsden, Ltd., with concrete slabs manufactured by Messrs. Stuarts Granolithic Co., Ltd.

The seating, which consists of splines on galvanized iron supports, was executed by Messrs. Piggott Bros. & Co. Ltd.

The sanitary work and heating (except the main drainage

Jointless floors in the dressing-rooms, offices, members', committees', and royal rooms in the south block have been put in by Messrs. Nuroads, Ltd.

The contractors for the tiling in the dressing-rooms are Messrs. Martin Van Straaten & Co.

The fencing around the site is oak park pales, the contractors being The Fernden Fencing Company.

The temporary fencing in the stand and to the north road is by the Kent County Fencing Company, and the pergola posts along the tea-lawn are reinforced concrete by Messrs. Stuarts Granolithic Co., Ltd.

There are collapsible gates to the north public entrance, supplied and fixed by the Bostwick Gate and Shutter Co., Ltd., and Stuarts Granolithic paving has been laid in the tea-room and the north public entrance.

The contractors for the metal windows are Messrs. F. A. Norris & Co., and the glazing has been done by Messrs. Mullen and Lumsden, Ltd.

The dressing-rooms are fitted with steel lockers by Messrs. Sankey-Sheldon, Ltd.

The hard courts are by the En-Tout Cas Company; and Messrs. Slazengers, Ltd., who are the contractors for the general equipment of the grounds for the meeting, have designed and carried out the scoring-boards and plan of the courts; the cover for the centre court is by Messrs. John Edgington & Co., Ltd.

The main supply of water to the grounds is from the Metropolitan Water Board's mains, but a supplementary supply is obtained from the Wimbledon Park Lake to a water tower 50 ft. high, with a storage tank of 2,000 gallons on the top, the water to which is raised by means of a Rotoplunge pump and driven by a Petter Junior gas engine.

Messrs. Davis Bennett & Co. are the contractors for the above engine and pump, and Messrs. Mullen and Lumsden, Ltd., for the suction pipe from the Wimbledon Park Lake and the circulation and overflow pipes in the tower.

The Late Mr. Alfred Williams, F.R.I.B.A.: A Link with Donaldson

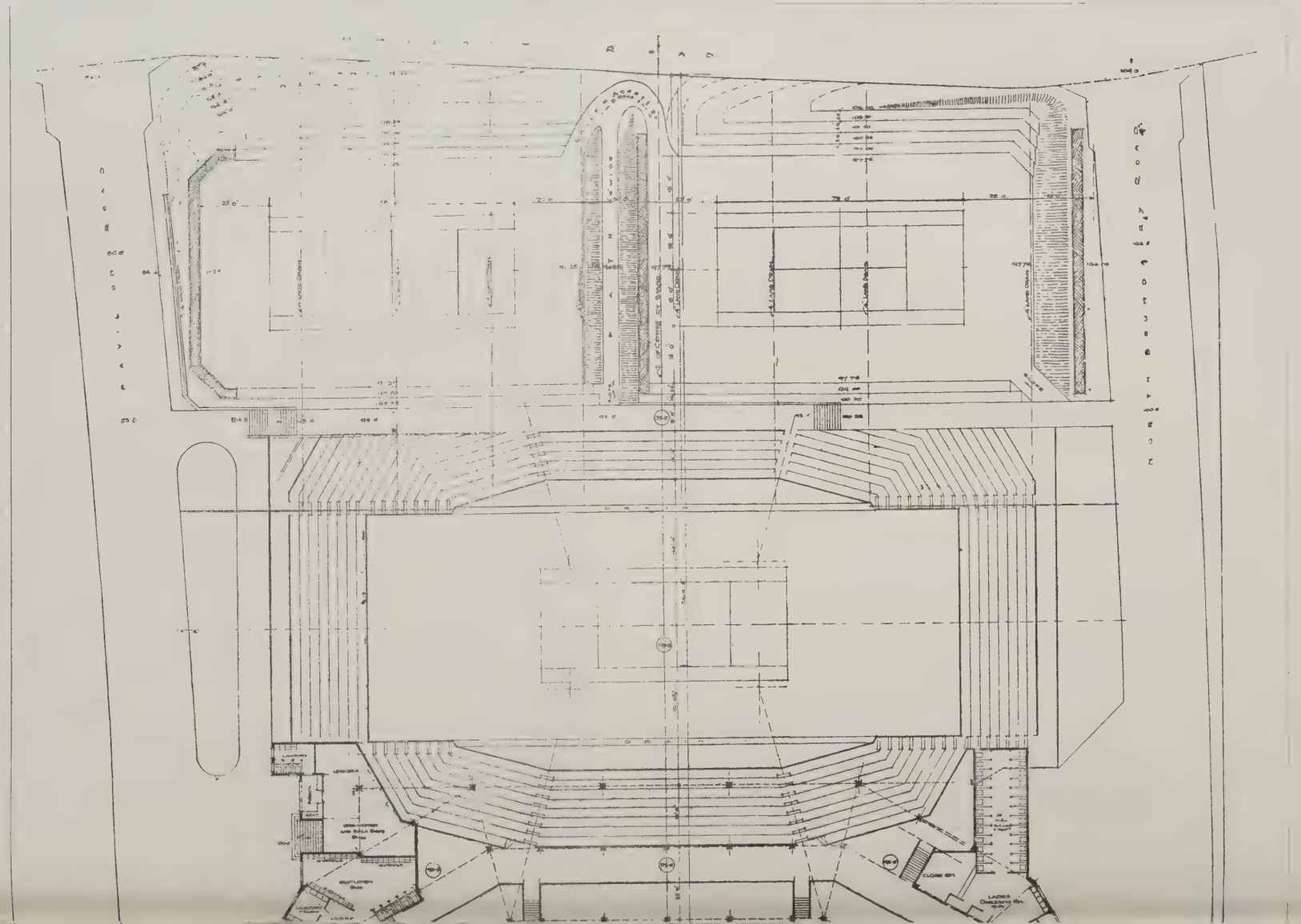
A link with the late Professor Thomas Leverton Donaldson, R.A., is severed by the death, a fortnight ago, of Mr. Alfred Williams, F.R.I.B.A. Mr. Williams, who was born in 1831, entered the office of Professor Donaldson in the early 'fifties. Donaldson had then been appointed District Surveyor for South Kensington under the old Metropolitan Board of Works, and Mr. Williams was associated with him in that office until, in 1884, Donaldson died. From 1884 until 1906, Mr. Alfred Williams discharged the duties of that post, and when he retired he had held it for about fifty years. Mr. Alfred Williams was a prodigious worker, and the faithful discharge of his official duties did not prevent his accomplishment of important architectural work of many and various kinds. He designed Kensington Infirmary; was architect to Mr. C. D. Harrod, who founded the famous stores; and Mr. Alfred Williams, jointly with his son, Mr. F. Ernest Williams (who now continues the practice in partnership with Mr. Alfred Cox), designed several branches of the London County, etc., Bank—for example, those at High Street, Kensington; at Camberwell, Gravesend, Hanover Square, and Covent Garden; and the premises for Grindlay's Banking Company, in Parliament Street, are of the same joint-authorship. Mr. Alfred Williams was associated, also, with Mr. C. W. Stevens in the alterations and additions to the Junior Athenæum, in Piccadilly, and led, indeed, a very busy professional life; for besides designing many important commercial premises beyond those already enumerated, he was the architect of a number of country houses, schools, and other buildings. At the time of his death Mr. Alfred Williams must have been almost alone in his memories of close personal association with Professor Donaldson, who, having been the fourth recipient of the Royal Gold Medal in 1851, became the fourth President of the Institute in 1863, holding that office until 1865. As Mr. J. Alfred Gotch so pleasantly reminded us last week, Professor Donaldson was the author of "the earliest written record concerning the Institute that has been preserved in its archives," and Mr. Gotch added that "the accomplished Professor Donaldson" was the only one of the founders of the Institute who was alive at the end of the first fifty years of its existence, and that during the whole of that period Donaldson "took an active part in its affairs, and, indeed, did probably more than any other person to mould its policy and direct its activities." He had been its first secretary. It is altogether a proud record, and Mr. Alfred Williams must have indeed cherished the memory of his close association with one of the "giants in those days," as Donaldson indisputably was.

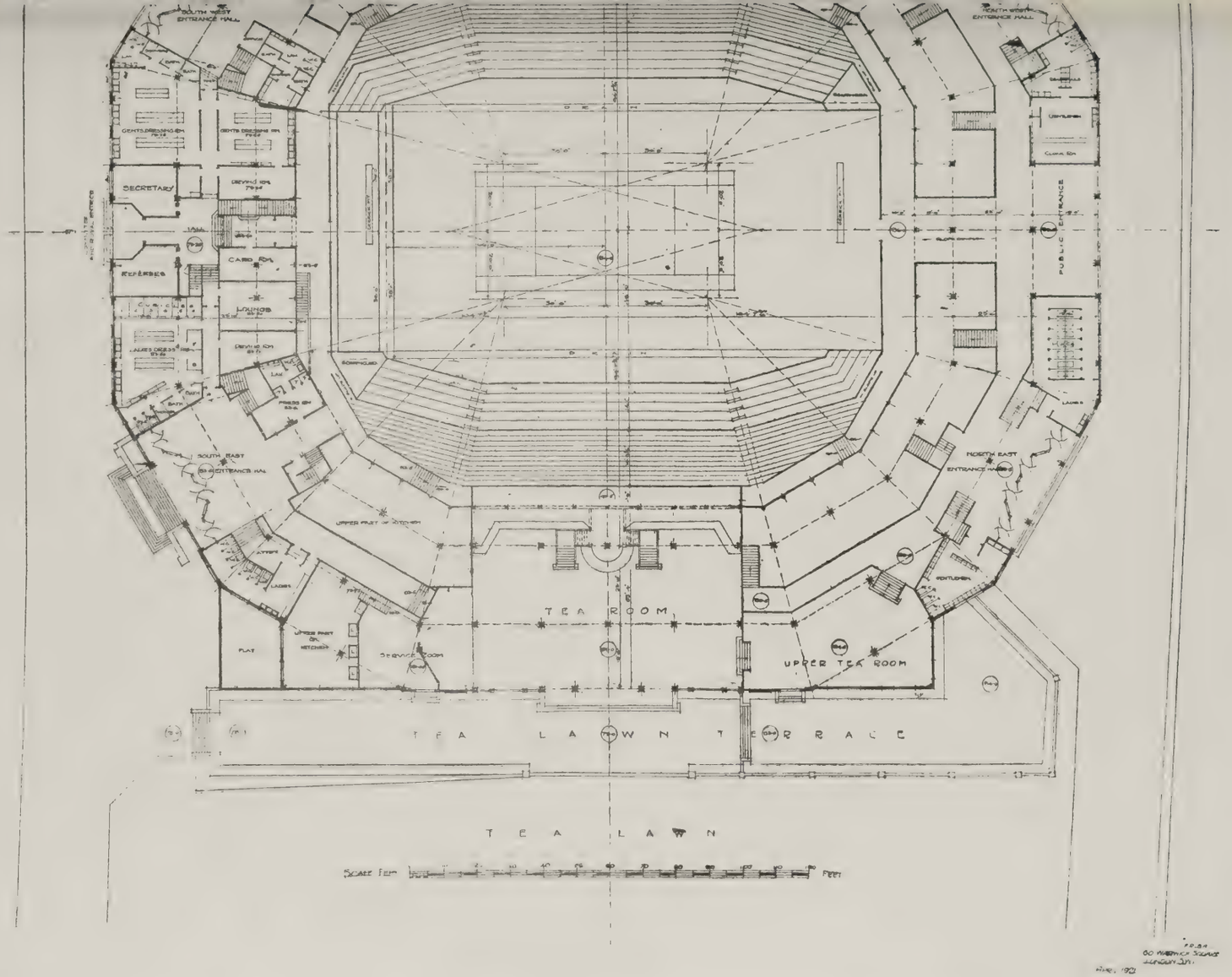
Photo : Aerophoto Co.

THE ALL-ENGLAND ENCLOSURE FROM THE AIR

Architects' Working Drawings. 56.—Ground Plan of the All-England Lawn Tennis Stand, Wimbledon.

Captain C. Stanley Peach, F.R.I.B.A., Architect.





At the new "Wimbledon" there are fifteen grass courts in addition to the centre court, making sixteen in all, and nine hard courts, in addition to the championship hard court, making ten in all. The entrances to the stand are from the five halls, two being situated on the south road and three on the north road. The north hall, central on the north front, is 180 ft. by 30 ft., and the other four, each 40 ft. by 32 ft., are placed at the corners of the building. Access to the upper tiers of seats is by staircases on the right and left of the entrance halls. The Royal entrance and the entrances for members of the club, committee, competitors, and officials are central on the south block. The tea-room, which is 150 ft. by 56 ft., is placed under the steppings, and occupies the whole east side, with a paved terrace the full length, 25 ft. wide, at ground level. In front is the tea-lawn, 300 ft. by 150 ft. The championship hard court is placed to the west of the centre court stand, the seats on the eastern side of it being under the tiers of the latter.

Correspondence

Architects in Popular Literature

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. F. R. Jelly, in his article "Architects in Popular Literature," published in your issue for May 17, seems to be of a sensitiveness which I have rarely seen equalled. The general value of the article may perhaps be judged by the remark of a lady to whom I read out the words about "Pecksniff." "Good gracious! Was he an *architect?* I'd quite forgotten."

The whole article is built on Pecksniff. But Pecksniff might have been parson, greengrocer, lawyer, chemist, or of any vocation for all the reader remembers. He is a satirized type of human being, not of architect. If this is the best case that can be made out against the treatment of architects in fiction, all I can say is architects are very lucky. Every profession gets satirized more or less strongly in fiction by the layman who writes novels. Think of the poor parsons, lawyers, doctors, soldiers—their case is far worse. I can assure your correspondent that the commonsense and discrimination of the reading public is more robust than he thinks; and architects may still hold up their heads.

Architecture is, or should be, a noble and inspiring art, which—whatever your correspondent may suppose—attracts the sympathy and interest of the practitioners of other arts; but the more those practitioners admire the beautiful and useful in architecture the more they are outraged by the horrible edifices which in their shoals disfigure this country, and the more they welcome the new spirit which has come and the architects who are animated by it.

JOHN GALSWORTHY.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. Jelly's interesting contribution omits surely the most important portrait of an architect in modern fiction, Halvard Solness, Ibsen's Master Builder. Possibly Mr. Jelly does not consider Ibsen "popular," but Solness added to his collection would serve to emphasize the unfortunate treatment that architects have suffered in fiction.

Ibsen, however, is too good an artist to do an injustice, and Solness possesses a tragic dignity that makes him in many ways great, and I am constrained to admire such a ruthless and unscrupulous devotion to the master passion of building as he displays. Solness is the real thing; he possesses the genuine flair for building that marks the architect. His home is burnt down and his twin boys die in the fire. He is enabled to lay out the garden of the house in villa lots. . . .

Solness (*with subdued emphasis*): It was simply and solely by that fire that I was enabled to build homes for human beings—cosy, comfortable, bright homes, where father and mother and the whole troop of children can live in safety and gladness, feeling what a happy thing it is to be alive in the world—and most of all to belong to each other—in great things and small.

Hilda (*ardently*): Well, and isn't it a great happiness for you to be able to build such beautiful homes?

Solness: The price, Hilda! The terrible price I had to pay for it.

NORMAN DALE.

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I read with interest Mr. F. R. Jelley's amusing article. Another instance is F. Anstey's "Brass Bottle," which introduces two architects, one the hero. Mr. Anstey, I believe, makes some reference to quantities or the quantity surveyor—the only instance to my knowledge in fiction.

C. W. PERRY.

Unification & Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—With regard to Mr. Keen, frankly I cannot understand him. Referring to a recent circular by the Defence League, he writes on the points set out and states: "The second one suggests that the present system of admission to the Institute is to be dropped. Nothing of the kind has been suggested or intended." At the meeting of the Institute on February 7 Mr. Keen and his friends objected to a resolution drawn up on similar lines, although 112 men voted in favour of it, and only 66 against it.

With reference to Mr. Welch's letter the Scheme is called Unification, but provides no machinery to ensure it. Optional schemes are useless. Unification can never be obtained except by compulsory powers in consequence of the passing of a Registration Act. Mr. Welch writes: "All architects not at present within the R.I.B.A. must be brought within it." How is he going to do it? I hope he has seen Mr. Keen's letter.

One very important fact should be firmly fixed in the minds of all Associates. At the recent meeting of the Unification and Registration Committee it was proposed and seconded that there should be no admittance to the Associate Class except by examination, the resolution was voted on, and rejected by a large majority. This fact speaks much more eloquently than dozens of evasive and indefinite official memoranda or letters from members of the Committee.

I see we are again asked to withdraw all criticism and opposition until the scheme is worked out in all its details. Now let us see what has happened, the Unification and Registration Committee passed certain resolutions giving the main basic principles of the scheme; they were published, presumably for the information and consideration of all architects, and they were forwarded to our Council. In the first place if the Committee did not want criticism at this stage why did they publish a scheme before all the details were worked out? And, again, when our Council considered the scheme, Mr. Keen and his friends did not say: "Please don't do anything; it is most unfair to pass any resolution or express any opinion at the present moment; please wait until you know all the details." Not a bit of it; the Council had no hesitation, the majority were in favour of the scheme, and the fact that the Council had approved it was advertised widely and used for all it was worth. Now when the general body of members starts to consider the scheme, and do exactly what the Council did, the members of the Unification and Registration Committee cry out in pious horror: "Please don't criticize now; it is most unfair to express your opinion until you know all the details."

Just imagine an architect submitting eighth-scale drawings to a client who wanted a house built, and the client saying, "I don't like your design," and then picture to yourself the architect saying in a dull, ponderous, Pecksniffian manner: "My dear sir, you pain me, really this is most unkind; honestly you have no right to object at the present moment; *you wait until you see my full-size details!*"

SYDNEY PERKS.

R.I.B.A. Council Meeting

On the recommendation of the Practice Standing Committee, the Council of the R.I.B.A. at their last meeting decided to make representations to the Queen Anne's Bounty Office with regard to the fees paid to architects. The following other business was also transacted at the meeting:—

Building By-laws.—A deputation was appointed to urge the Ministry of Health to extend the operation of Section 25 of the Housing and Town Planning Act of 1919 for a further period of at least twelve months.

Electric Lighting, Heating, etc.—It was decided to arrange for the holding of a joint meeting between the Royal Institute and the Institution of Electrical Engineers for the purpose of discussing papers on the use of electricity for the lighting and heating of buildings, and for domestic purposes.

The British Engineering Standards Association.—Mr. Max Clarke was appointed to represent the R.I.B.A. on the Sectional Committee on Bridges and General Building Construction.

Fellowship of the R.I.B.A.—Under the provisions of By-law 12, Major-General Sir Charles Rosenthal, K.C.B., A.R.I.B.A. was unanimously elected a Fellow of the Royal Institute.

Membership.—Twelve candidates for the Fellowship, twenty-four candidates for the Associateship, and ten candidates for the Hon. Associateship were duly nominated.

The Stability of Walls.—III

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

IT is generally supposed that boundary walls are strengthened by the addition of buttresses or pilasters, but it is a fact that with a given wind-pressure the maximum compression at the base will be greater with 4½ in. pilasters than without. This is not due to the added weight of the pilasters, as they add basal area at the same time, and the direct load per square foot does not alter. It would, perhaps, be too mathematical to go into the proof of this here, but the following facts may be stated: If we take a 9 in. brick wall 6 ft. high and consider a length of 12 ft. unattached at the ends as shown in plan Fig. 10, the brickwork weighing 112 lb. per ft. cub., and the wind blowing perpendicular to one face with a force of 28 lb. sq. ft., then the maximum stresses on the base will be 6048 lb. per sq. ft. compression, and 4704 lb. per sq. ft. tension. Now add a pilaster or buttress bonded in to the other work 18 in. wide and 4½ in. projection, on the side further from the wind, as shown in plan Fig. 11. The maximum stresses will now be 959 lb. per sq. ft. compression, and 462 lb. per sq. ft. tension, an increase in the compressive stress of 1911 lb., or just over 17 cwt. per sq. ft. If we make the projection of the buttress 9 in. the maximum stresses will be 6720 lb. and 011 lb. per sq. ft. respectively. The variation is shown graphically in Fig. 12. Technically a pier or pilaster on the side next the wind is a counterfort and one on the opposite side is a buttress.

Adding a pilaster on the opposite side also, as in Fig. 13, with the same wind-pressure, we have the moment of inertia

$$I = \frac{1}{12}(bd^3 + BD^3) = \frac{1{\cdot}5 \times (1{\cdot}5)^3 + 10{\cdot}5 \times (\frac{3}{4})^3}{12}$$

$= {\cdot}7909$ and the section modulus

$$= \frac{I}{y} = \frac{{\cdot}7909}{{\cdot}75} = 1{\cdot}0545.$$

Then $\frac{W}{A} \pm \frac{M}{Z} = 672 \pm \frac{6048}{1{\cdot}0545} = 672 \pm 5735$

$= 6407$ lb. sq. ft. compression and 5063 lb. sq. ft. tension, showing that double pilasters add no strength to the original wall, while a single pilaster is a source of weakness.

The London Building Regulations do not allow any wall to be more than sixteen times its thickness in height. This does not mean that it would be safe to stand alone as a detached wall, but that it is considered the maximum height for safety in the walls of a building. When a higher wall is required the lower portion must be thickened by 4½ in. set-offs on the inside.

Such a wall is shown in Fig. 14. If this carried no other load than its own weight the weight of each portion, taking 1 ft. run, would give a resultant through the mean centre of gravity of $120\ (10 \times \frac{3}{4} + 15 \times \frac{9}{8} + 20 \times 1{\cdot}5)$ $= 120\ (7{\cdot}5 + 16{\cdot}875 + 30) = 120 \times 54{\cdot}375$ $= 6525$ lb., and the distance of the centre of gravity from the outer face would be

$$\frac{7{\cdot}5 \times 4{\cdot}5 + 16{\cdot}875 \times 7 + 30 \times 9}{7{\cdot}5 + 16{\cdot}875 + 30} = \frac{33{\cdot}75 + 118{\cdot}125 + 270}{54{\cdot}375} = 7{\cdot}76 \text{ in.}$$

or $9 - 7{\cdot}76 = 1{\cdot}24$ in. beyond the centre of base. This would make the pressure at base

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{6525}{1{\cdot}5} \pm \frac{6525 \times 1{\cdot}24}{\frac{1}{6} \times (1{\cdot}5)^2} = 4350 \pm 1798$$

or 6148 lb. sq. ft. compression at outer edge, and 2552 lb. sq. ft. compression at inner edge. In practice the weight of floors and roof would be taken on the set-offs, so that the total load would be increased; but the centre of gravity being brought nearer the inside, there would be less tendency for the wall to overturn than the above calculation shows. In the event of a fire, however, where the floors and roof are burnt away, the above calculation holds good, and shows that a slight additional pressure due to fallen rubbish may account for many of the accidents that occur by the outer walls collapsing after a fire.

Gwilt gave a formula for the thickness of walls for buildings which may be stated as follows:— $t = \frac{Lc}{\sqrt{L^2 + H^2}}$, where t = thickness of wall in feet, H = height in feet, L = length in feet (between cross or party walls), c = constant $= \frac{H}{12}$ for warehouses and $\frac{H}{20}$ for dwelling houses. Mr. E. F. Etchells gives a rule as follows: $n = \frac{1}{2} + \frac{H}{40} + \frac{L}{90}$, where n = number of bricks thickness at base of wall, H = height in feet, L = length in feet.

All walls should have footings, each projecting 2¼ in. The number of courses of footings should equal the number of half-bricks in thickness of wall, and the width of the lowest course be twice thickness of base of wall. If not on concrete it is desirable to make the bottom course double, but this is not often done. The projection of the concrete beyond the footings should be equal to half the thickness of the wall, and the depth equal to the thickness of wall. This is especially necessary on a clay foundation. The concrete should be one part Portland cement to British Standard Specification, three parts sharp sand, and six parts of larger aggregate measured separately. If lias lime be used for the concrete the proportion should be 1 : 2 : 4 instead of 1 : 3 : 6. Common lime is of little or no use for concrete.

(To be continued.)

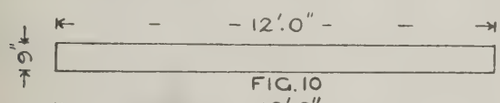


FIG. 10

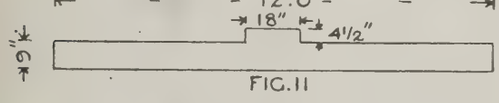


FIG. 11

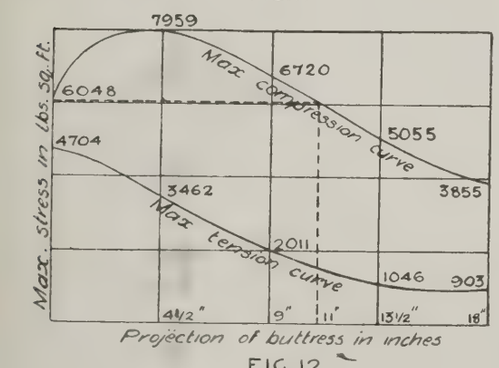


FIG 12

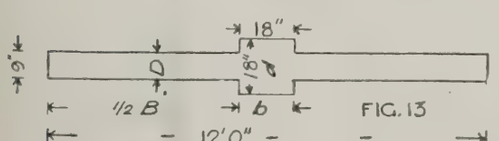


FIG. 13

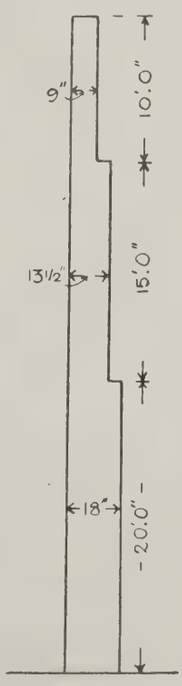


FIG. 14

R.I.B.A.

Henry Saxon Snell Prize

Owing to the generosity of Mr. A. Saxon Snell the Henry Saxon Snell Prize has, this year, been increased by £10, bringing the value of the prize to £60. The subject set is a maternity home and infant welfare centre. Full particulars may be obtained, free of charge, from the R.I.B.A.

Book Reviews

The Jones Collection

Is the high value of our museum catalogues fully realized by the general public? Almost without exception, such catalogues are scholarly and informative, and of several it could be said that they embody all that is worth knowing of the subjects on which they treat. Some, of course, are necessarily less comprehensive than others, but most are very thorough as far as they go.

An excellent specimen of the latter class is the recently issued catalogue of the furniture in the Jones Collection at the Victoria and Albert Museum. Although its scope is nominally restricted to the Jones Collection, it gives, in its scholarly introduction, a most useful survey of the art of furniture design in the period to which the Jones Collection is mostly referable; and the descriptions and illustrations of the exhibits themselves are very illuminating.

In a short preface to the catalogue (which is of neat quarto shape, and is admirably printed) Sir Cecil Smith states that most of the furniture in the magnificent Jones Collection, which passed to the nation on the death of Mr. John Jones, of 95 Piccadilly, in 1882, was acquired between 1865 and 1882, "a period that was marked in England by a fashion for the collection of works of art of the Italian and French Renaissance and of French examples of the eighteenth century. It was no doubt due to this influence," he adds, "that Mr. Jones devoted his attention mainly to the French cabinetwork of the period of Louis XV and Louis XVI, selecting these for their distinction rather than with the view of furnishing his residence." He collected also pictures, metalwork, and jewellery, ceramics and sculpture, which were in the bequest, and of these things we are promised further catalogues. Mr. Oliver Brackett, who compiled the catalogue of furniture, states that the collection is composed, except for a few unimportant specimens, of the eighteenth century, the periods of Louis XV and Louis XVI being most strongly represented.

Mr. Brackett believes that the richness of England in French cabinetwork of this date is hardly realized. It was the French Revolution that gave rich collectors i England the opportunity, which the eagerly seized, to acquire many treasure from impoverished French noblemen Mr. Brackett claims that in this collectio it is possible "to study the evolution o French furniture from the time of Lou XIV (to which period the best of th Boulle work belongs), passing from th heavy models with restless curves an rococo mounts, characteristic of the sty of Louis XV, to the more refined and sen sitive types of Louis XVI, severe with th straight lines of their design and th classical character of their ornament.

Several of the pieces in the Jones Co lection have historical as well as intrinsi interests. Two of them bear cyphers o the royal house of France; a work-tabl and stand were given in 1786 by Mari Antoinette to Mrs. Eden, afterward Lady Auckland, and a Sèvres plaque i painted with the monogram of th Princess de Lamballe; but, as Mr Brackett is careful to note, the virtue o the piece resides in every case in it qualities of workmanship, rather than i its associations.

COMMODE. SIGNED P BENIZOT. PERIOD OF LOUIS XVI.

Further supplementary points of interest are that no other public museum contains furniture designed by Bayer, Benizot, Garnier, or Jansen; that works by Haupt are rare outside Sweden, and that therefore the Jones Collection is specially fortunate in including the singularly beautiful commode designed by him. It is "of mahogany and other woods, the central panel of the front decorated in marquetry with two cupids under wheat sheaves flanked by panels containing floral designs; mounted in ormolu, with ribbons, rosettes, scrolls, and festoons. On the top is a slab of variegated red marble"—a feature that one would rather have preferred to be omitted.

Mr. Brackett notes four processes of decoration: mounting in gilt metal (ormolu), lacquer-work, marquetry, and inlay of porcelain. "Carving in wood," Mr. Brackett remarks, "at this time was not favoured by French cabinetmakers. In the middle of the century, when in England the school of Chippendale was producing its finest carved mahogany furniture, the French craftsmen relied for decorative effect on richly chased mounts in ormolu. . . . In marquetry work, derived from the Italians of the Renaissance, the French cabinetmaker excelled. By ingenious choice of wood, either stained or natural, and by skilful workmanship, he could obtain effects of light and shade as well as of colour, which gave to his work something of the nature of painting." Fifty pages of admirably produced photo-process engravings reflect the singular beauty of the pieces in the Jones Collection; and the descriptions under the various entries are exceedingly well done; brief data respecting the craftsman being given wherever the authorship could be ascertained. There is a bibliography enumerating the chief sources of information relating to the period.

Victoria and Albert Museum. Catalogue of the Jones Collection. Part I—Furniture. By Oliver Brackett, London. Printed under the Authority of His Majesty's Stationery Office. Price 2s. 6d. net.

The Cost of Cottage Building

In view of the high cost of building in these days, the Building Research Board of the Department of Scientific and Industrial Research have investigated the efficiency of certain older methods of construction which have now fallen into disuse. It is thought that in suitable localities the revival of some of these methods might be advantageous.

A report,* recently issued, describes the constructions of five experimental cottages, which combined a trial of these additional methods with experiments in many different new methods and items of construction as possible. The five cottages were constructed of brick, concrete, chalk and cement, rammed chalk and straw, and rammed chalk respectively; all these materials were available in the neighbourhood. Architectural considerations and the general scheme of research are set forth in Part I of that report, and full details of construction are given in Part II. The report is illustrated with plans, working drawings, and many photographs, which are described in the text.

The cob and pisé de terre methods of construction are dealt with in a further report† issued by the Board. The first part deals with cob and comprises notes on Devonshire cob walls, clay-lump building in Norfolk, and mud-walling in Bengal. Part II describes pisé de terre, the corresponding Belgian system ("Le Terradamente"), and pisé de terre in the Simla Hills and other places. This collection of notes may be useful as a guide to those who are obliged or pleased, in exceptional circumstances, to make the best of local materials. The methods described have the merit of simplicity. The results of compression tests on pisé de terre blocks are given, and the report concludes with a short bibliography of the subject. This report is also illustrated with photographs.

A third report‡ gives a diagrammatical analysis of the costs of construction of workmen's cottages built during the war. Some of the diagrams may be utilized as labour-saving devices for calculating the requirements of men and material in housing schemes; they include a set of progress diagrams which, if kept up-to-date, will enable a close watch to be kept on schemes in progress. A full explanation of the methods by which the diagrams were compiled is given in the text.

The three reports mentioned above should be of interest to all those who are concerned in housing schemes or in building generally.

* "Experimental Cottages." By W. R. Jaggard, F.R.I.B.A. Published by H.M. Stationery Office. Price 5s. net.

† "Building in Cob and Pisé de Terre." Special Report No. 5. Published by H.M. Stationery Office. Price 2s. net.

‡ "A Graphical Cost Analysis of Cottage Building." By W. H. Weinwright, A.M.Inst.C.E., A.M.I.Mech.E., etc. Published by H.M. Stationery Office. Price 2s. 6d. net.

Mill Hill School "Book of Remembrance"

"You have every reason to be proud of your son, as we have to be of our brother officer." That message to the parents of a Mill Hill youth fallen in battle might appropriately stand on the title-page of "The Book of Remembrance and War Record of Mill Hill School"; for it is confirmed in the many written records appended to the names of the brave youths of Mill Hill who made the supreme sacrifice for their country, and it shines forth unmistakably from the many portraits that form so noble a collection in the book. Among the plates of illustrations are included views of the Gate of Honour designed by Mr. Stanley Hamp, and dedicated on October 30, 1920.

"1914–1919. The Book of Remembrance and War Record of Mill Hill School." Compiled by Norman G. Brett-James and John Gifford. Published by T. Malcomson, The Surrey Fine Art Press, Reigate.

Publications Received

"The Welsh Housing and Development Year-Book, 1922." Edited by D. Lleufer Thomas, chairman of the Welsh Housing and Development Association. Price 2s. net. The Welsh Housing and Development Association, 38 Charles Street, Cardiff.

Victoria and Albert Museum.—"Ironwork: Part III. The Artistic Working of Iron in Great Britain from the Earliest Times." By J. Starkie Gardner. Price 3s. 6d. net; 3s. 11d. post free. Victoria and Albert Museum, South Kensington, S.W.7.

R.I.B.A. Annual Dinner

The annual dinner of the Institute took place at Prince's Restaurant last Wednesday, and a very sumptuous affair it was.

The evening, the dinner, and the room were alike hot, and several speakers made complaint that the temperature somewhat retarded the flow of their eloquence. After-dinner speeches were, however, fully equal in excellence to the first half of the entertainment, which ministered most agreeably to both ears and palate.

Among the honoured guests were the President of the Board of Education, the Right Hon. Lord Justice Younger, Sir Alfred Hopkinson, Sir Sydney Olivier, and that "cheery chieftain of the church," the Dean of St. Paul's.

Proposing the toast of "The Arts," Mr. Fisher, speaking in the absence of Lord Midleton, said that architects were characterised by their realization of business and of the beautiful and ideal. He remarked, to the accompaniment of ribald laughter, that they could tell the cost of a house at a glance, and their estimates, if not invariably exact, were very close to the provisional sum given. Architects also lived in dreamland. Following the bent of their own fancy they embodied the aspirations of different classes, races, and epochs. They were the most skilled devisers of houses, and fortunate were the people who lived in them. Art was an essential ingredient of a sound education.

Sir Aston Webb, acknowledging the toast, said it was true that architects had to give estimates for houses, and he thought, as a rule, they did it very well. Sometimes the cost came out a little less, and sometimes a little more. Art gave to the lover of art its silent and profound influence, and he felt the better for it, although, perhaps, he did not know exactly how. The artist must have enthusiasm for the mystery and power of art. Art, if it was to live, must be idealistic and realistic. The ideal state must come from the man's own consciousness and feeling; the realistic portion of it must be developed through education. Artists did not live in the clouds; many of them were great men in the world. The civic survey was the work of the R.I.B.A., and the road plans had proved of great value to the State. Like Jewish exiles who looked towards Jerusalem, they must keep their windows open and look towards their ideals.

Sir Alfred Hopkinson, K.C., proposed the toast of the Institute, and said that having just returned from abroad he was realizing what a beautiful city London was.

Replying, the President declared that the whole of mankind was divided into classes—architects, clients, and possible clients. There was only one enemy in the Institute, and that was apathy. A great many of them had been asked from time to time by clients and members of the public for advice as to whether they were wise in saving their money for a further fall in building prices. It was dangerous to prophesy, but never dangerous to give an honest opinion, and the conclusion he had come to was that, wise as the building public had been in reserving their money during the past year, the time was either here or close at hand at which the liberation of that money would be a wise policy on their part.

The guests were toasted at the invitation of Mr. John Slater, past vice-president of the Institute, who said that the beacon-light of hospitality had always burned brightly at the R.I.B.A.

Responses were made by Lord Justice Younger, Dean Inge, and M. Albert Louvet, president of the Société Centrale des Architectes Diplômés par le Gouvernement.

Dean Inge said that he had recently received a letter from the Marconi Institute asking if they could install a wireless telephone adjustment to the pulpit and choir of his Cathedral. In reply he had asked if there were any facilities for collecting offertories by wireless, but the answer had been evasive.

Society of Architects Council Meeting

At the last meeting of the Council of the Society of Architects the following business was transacted :—

Building Code.—The Society's representatives on the Joint Committee reported that Mr. A. Alban H. Scott, a past Vice-President S.A. had been co-opted a member of the Joint Committee, and that it had been decided to recommend the R.I.B.A. to approach the Ministry of Health with a view of obtaining an extension of the period granted for the relaxation of building by-laws due to expire in July 1922.

Library.—The report of the Art and Literature Committee showed that the demands on the Society's Circulating loan library were increasing and that a number of new books had been acquired by donation and purchase. A scheme is under consideration for a considerable extension of the loan library facilities for the benefit of country members and for additions to the collection of books of reference.

Premiums for Papers.—The Council has allocated three premiums of ten guineas each to be at the disposal of the Art and Literature Committee under certain conditions during any one year in remunerating writers commissioned by the Council to prepare articles on subjects of professional interest for the use of the Society.

The Society's Competitions. — The assessors' award of £10 10s. to the author of the design No. 1 in the Travelling Studentship Competition was confirmed. On opening the sealed envelope the author was found to be Harold Anderson (student) of Blean, Canterbury. A scheme is under consideration for enabling overseas competitors to take part in the half-yearly design competitions.

Council Membership.—Ill-health and other emergencies having prevented Messrs. Henry Tanner and F. Hall-Jones, Members of Council, from attending the meetings during the present session, they have tendered their resignations of the office, which have been accepted with regret.

Building Trades Parliament. — The Council has given notice of its intention to withdraw from representation on the Industrial Council of the Building Industry as from June 30, 1922.

Architects and the Royal Engineers.—The Society has accepted an invitation from the Council of the R.I.B.A. to send a representative to the Committee formed to organize a presentation to the Headquarters Mess from Temporary R.E. officers now returned to civil life. Mr. G. Blair Imrie (late Major R.E.) will represent the Society.

Registration in South Africa.—A report from the Society's Branch at Johannesburg shows that the Branch is contributing its quota from its own resources to the funds of the Union Registration Bill Committee, and is holding in reserve the fifty guineas donated by the Home Council for use in any further call upon the finances of the Branch. Although the Branch in common with other bodies in South Africa has only one official representative on the Bill Committee, seven out of the eleven members are Fellows of the Society, and the progress with the Draft Act now in preparation for presentation to the House of Assembly is due to the untiring and energetic work of the Branch Council.

Indian Branch.—The first annual meeting of the Indian Branch of the Society was due to be held at Bombay on April 27, 1922, when it was anticipated that Mr. G. H. Wenyon (Member of Council) whose professional engagements have necessitated a visit to India, would occupy the chair prior to returning home, when it is hoped he will be able personally to report progress to the Council .

Building Exhibition.—The Council has passed a resolution conveying the Society's thanks for and appreciation of Mr. H. Greville Montgomery's courtesy and hospitality which he so freely extended to the members during the exhibition at Olympia.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Housing in Scotland.

Mr. Munro, Secretary of State for Scotland, stated in the House of Commons, that the total number of unemployed workers in the building trades in Scotland was 10,121 at April 24 last. The average costs of houses under State-assisted housing schemes during 1919, 1920, and 1921 were :—

	1919	1920.	1921.
Three-apartment flats	£700	£900	£850
Three-apartment cottages ...	750	950	950
Four-apartment cottages ...	800	1,050	1,000
Five-apartment cottages ...	850	1,250	1,150

The Scottish Board of Health had not had a sufficient number of recent tenders to enable an adequate comparison to be drawn with these figures, but tenders submitted last month by the Town Council of Glasgow gave some indication of present-day building costs, the approved costs of the four types of houses specified being £504, £612, £634, and £698 respectively. He hoped that, if the present tendency of costs of labour and material to fall continued, private enterprise would be induced to resume house building.

£350 Houses at Nottingham.

Replying to a question from Mr. W. Thorne, Sir A. Mond said that he was gratified to note that the Nottingham Corporation had succeeded in obtaining tenders for building houses of the non-parlour type at a cost of £350 a house, which included the cost of land and making of roads. He was not unhopeful that still lower prices would be obtained. He would be happy to entertain proposals from local authorities for building houses at low cost on their own responsibility and where a local authority was unable to raise the necessary loans from other sources, he would consider the question of recommending advances by the Public Works Loan Commissioners.

R.I.B.A. Conference at Cardiff

The annual provincial conference of the R.I.B.A. and its Allied Societies is to be held, in conjunction with the South Wales Institute of Architects, at Cardiff from June 8 to 10. Mr. Paul Waterhouse, P.R.I.B.A., will preside. The headquarters of the conference will be at the Technical College, Cathays Park. Appended is the programme of the proceedings :—

Thursday, June 8.

Members will assemble at Cardiff. In the evening a reception will be held at the City Hall by the Lord Mayor, Councillor F. H. Turnbull, and an exhibition of prints and photographs of Cardiff will be on view.

Friday, June 9.

In the morning there will be a paper by Major Harry Barnes, M.P., on "Unification and Registration," followed by a discussion and a visit to the City Hall and Law Courts, Cathays Park. In the afternoon there will be visits to the Welsh National Museum and the Glamorgan County Hall, and tea in the Museum by the kind invitation of Alderman Treharne James. In the evening the conference banquet will be held at the Park Hotel.

Saturday, June 10.

In the morning there will be papers by Mr. Herbert T. Buckland, F.R.I.B.A., on "Civic Architecture and Advisory Art Committees," and Mr. Percy Thomas, O.B.E., F.R.I.B.A., President of the South Wales Institute of Architects, on "Problems of Practice," followed by discussions. In the afternoon there will be a visit to Cardiff Castle and Grounds, and tea will be served in the Banqueting Hall of the Castle, by the kind invitation of the Marquis of Bute. In the evening there will be a smoking concert, by the invitation of the South Wales Institute. Music will be provided by the "Cymric Octette."

Sunday, June 11.

This day will be devoted to a char-à-banc tour to Tintern Abbey and the Wye Valley for those members who stay in Cardiff over the week-end.

Members, Licentiates, and Students of the R.I.B.A., and members of the A.A. and the Allied Societies, are cordially invited to attend the conference. Membership of the Conference is free, but members will individually pay the cost of the banquet and the char-à-banc tour. Ladies are particularly invited to attend as guests of members of the conference. Those who desire to attend the conference are requested to send their names and the names of their guests as soon as possible to the Secretary, R.I.B.A., 9 Conduit Street, W.1, when they will receive a further circular giving fuller details of various arrangements, information as to hotels, etc., and a handbook of the conference.

A Pictorial Review

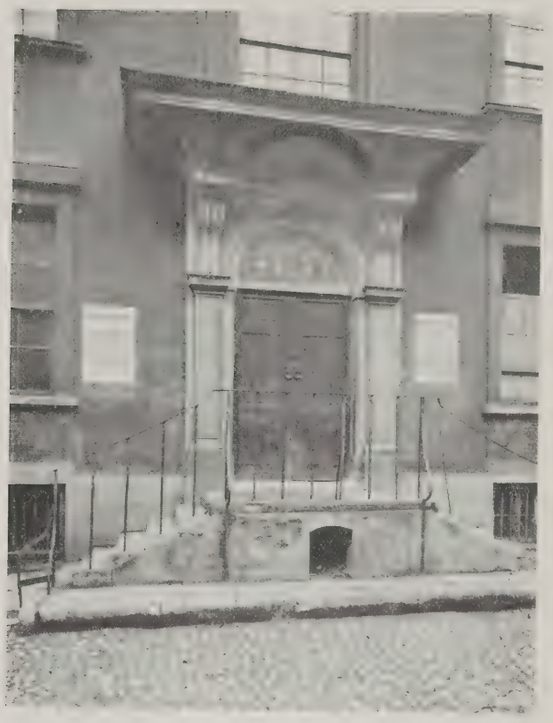
Sketches as well as photographs may be submitted for this Review, and a fee of 2s. 6d. will be paid for each illustration accepted. Contributions should be accompanied by short descriptive notes.

Annequin Church, near Loos, was wrecked by shell fire during the war, but the steeple still stands as a monument to the constructive skill of its builder. It is precariously perched over thin air, and is supported apparently by two wooden uprights. A curious example of stability.
H. A. J. LAMB.

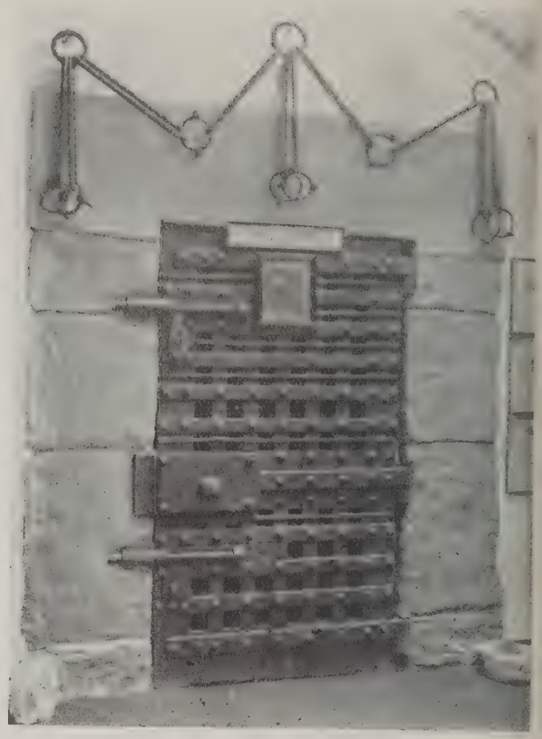
This amazing church is built on the sand dunes at Merlimont-sur mer in France. The treatment of the windows and the roof projections over them is surely unique, and one surmises that it is built by a modern of the moderns.—H. A. J. L.

This illustration shows St. George's Crypt, Mont Orgueil Castle, Jersey—a magnificently architectural piece of thirteenth-century vaulting. The columns, which are about 3 ft. 6 in. high, consist of Jersey granite, while the vaulting is of chalk and rubble.—H. A. J. L.

A fanlight and doorway from a house at St. Albans which shows Adam period work at its best—originality without fantastic over-decoration. Interesting as the detail is, the illustration loses half the charm of the original by its failure to express the contrast in colour between the white doorway and sun-tanned bricks.



A doorway to a house in Botolph Lane, now destroyed. It was attributed to Wren, and displays in a remarkable way the tremendous creative power of his imagination. The overdoor is a sheer experiment, but it is a great success. Possibly, however, the reiteration of the fanlight semicircle is unhappy.—P. E. L.

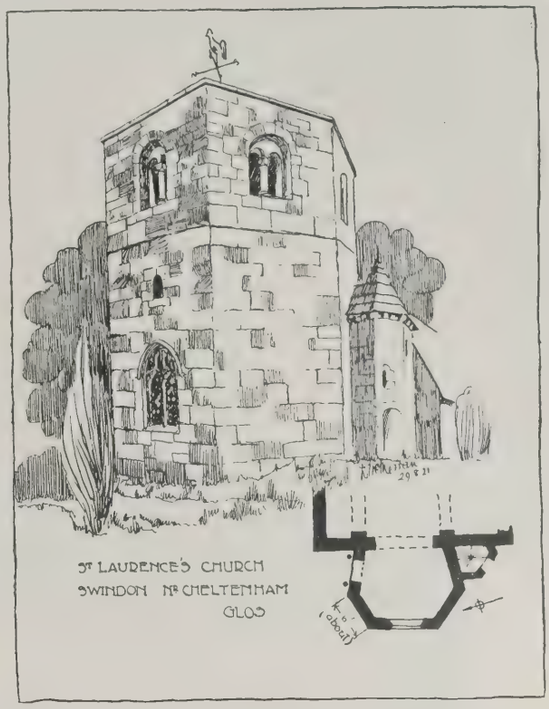


The original main entrance to Newgate Prison is now in the London Museum. Newgate was the masterpiece of Dance the younger, and not the least fanciful of his ideas was to use manacles for his decorations instead of swags. This was symbolical ornament with a vengeance.—BERNARD TUTTLE.

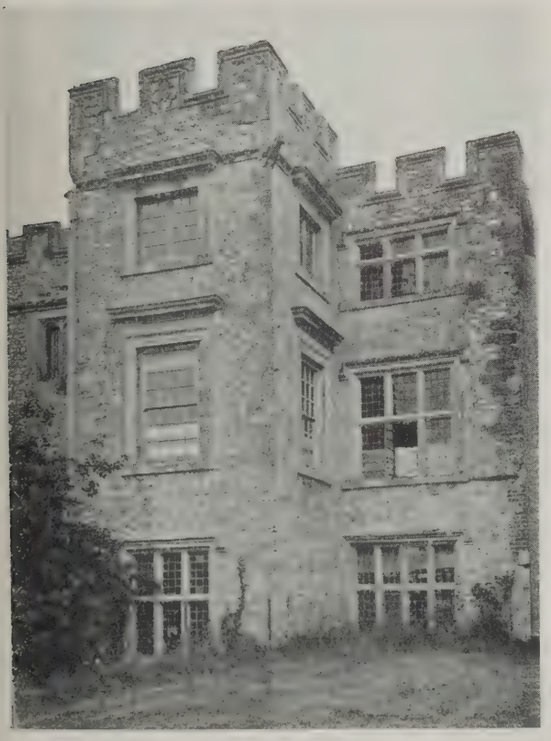
A staircase from Clifford Street, London, showing a nobly ornamented balustrade. The staircase is, of course, early in date, and the detail is rather coarse, but it is a fine vigorous design. It has been attributed to Isaac Ware.—NATHANIEL CLEGG.

The above cup has been presented by Mr. Dudley Bartlett to the London Master Builders Sports Association, and is given yearly to the winning football team of builders. It is now in the proud possession of Messrs. Holland, Hannen, and Cubitts, who are this year's winners, and was presented to them recently by Mr. Matthew Hill of Higgs and Hill.

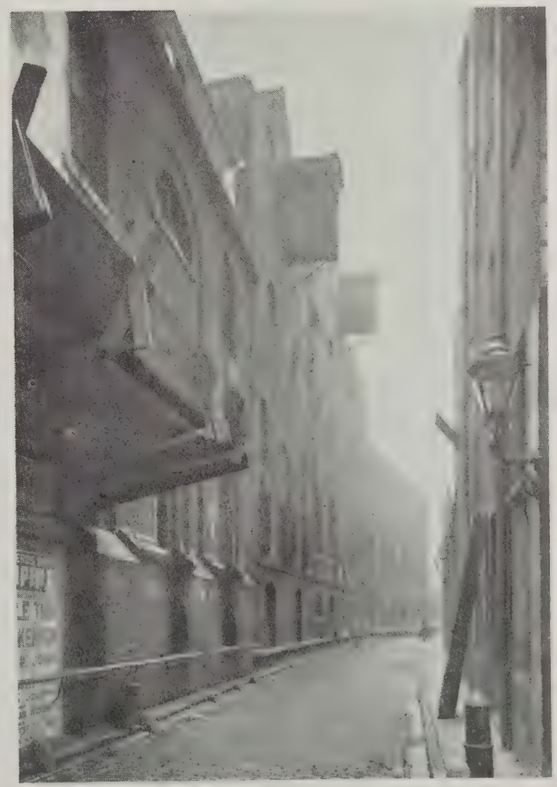
The shrine of St. Alban, in St. Albans Abbey Church, and the martyrdom of the Saint depicted with his head severed from his body and lying on the ground beneath him. The sculptor has procured by this means a figure composition singularly suitable to the shape of the niche he had to fill.—H. A. J. L.



This tower, which forms part of a small church in Gloucestershire, is obviously Norman, but it shows a curious departure from the square plan of the period. It is a roughly constructed hexagon. Surely this is rare in Norman work.—D. H. MC MORRAN.



The old Manor House at Shute, near Seaton. How is this as an example of bygone vandalism? Some seventeenth-century builder has removed four of the Tudor windows from the tower and substituted others of Renaissance character. What a pity there was no Society for the Protection of Ancient Buildings in those days.—F. C.



Meux's Brewery which used to stand near the Y.M.C.A. in a back street between Tottenham Court Road and New Oxford Street has just been pulled down. The ordinary passer-by never noticed it, but to architects it was always interesting as a grim, powerful piece of factory design. It recalled more than anything else the nightmare carceries of Piranesi.—LESLIE LYON.

London Office Remodelling: A Recent Example

THE offices of the Ingersoll-Rand Co., Ltd., No. 165 Queen Victoria Street, London, are being remodelled from the designs of Messrs. W. J. Kieffer and H. S. Fleming, A.R.I.B.A., architects. The premises are situated at the junction of Upper Thames Street and Queen Victoria Street, one of the most valuable and commanding sites in the neighbourhood. A beginning has been made with the entrance hall and the interior. On four floors the corridors and offices have been rearranged, and the space for the greater part of each floor thrown into one large room. Smaller offices are retained where necessary. The main entrance and the hall have been remodelled entirely.

The architects for the alterations, feeling that the architectural character of the existing building is not sufficiently definite to be followed, have ignored it, and taken for the motives of their treatment a free interpretation of the traditions of the eighteenth century. Their designs, however, have been severely controlled everywhere by existing fixtures and arrangements which could not be altered.

The new entrance is a simple arrange ment of a doorway flanked by column and subsidiary openings with fanlight over them, the whole being surrounde by a strong architrave moulding breakin up over the centre portion of the lint to connect with the existing cornice an to enclose a band of delicate and finel executed carving. The spirit of th carving work is reflected again in th enrichments of the mullions between th fanlights. Wrought-iron grilles fill th upper panels of the doors, side window and the lights over them. The chie

NEW ENTRANCE TO OFFICES OF THE INGERSOLL-RAND CO., LTD., QUEEN VICTORIA STREET, LONDON.
W. J. KIEFFER AND H. S. FLEMING, A.R.I.B.A., ARCHITECTS.

nterest is centred on the panels of the loors and the fanlight over them. On ;ach side of the entrance is a wrought-ron lamp bracket attached to the stone-vork. The lettering and the numerals on the frieze are in lead.

The old hall was dull and uninteresting ind practically no effort at architectural :reatment, either in plan or in details, had been made. Many difficulties had to be net and overcome, and the staircase, lift, ind all existing door openings had to remain. In addition two large stan-:heons, very awkwardly placed, and :arrying the two girders of the first floor, had to be dealt with, and they eventually gave the key to and formed the basis of he new design. They are masked by the arge pilasters, carried up as the main order to support the entablature. The vall spaces between them are panelled, vith a bold moulding. The proportions of .ll the subordinate features were fixed very largely by the heights and positions of existing doors. The pilasters are in wood, and the entablature and most of he panelling in plaster. The wall sur-aces of the staircase from the hall to the ourth floor are panelled in a similar nanner.

On the first floor a waiting-hall was equired to give access to the board-room, rivate offices, and principal staff-room. 'his was formed by cutting off a portion f the rooms adjoining the landing—this pace, being farthest away from the win-ows on all sides, was relatively of little se for offices. The doors here are in ahogany, and the architraves and over-oors in deal, and cornices in plaster. 'he low barrier across it is of wrought on, painted black, with a brass hand-ail and a small swing gate in the centre f it. The lift enclosure is carried out in rought iron to harmonize with the other onwork. For artificial lighting Brasco ghts have been used throughout the hole building.

The walls of the offices generally have een painted a light cream colour, and he ceilings white, with the object of re-ecting as much light as possible. Those f the private offices have been painted a dove-grey, as well as all woodwork in the entrance hall. The walls, over-doors, and other architectural features in the waiting-hall (except the doors themselves) are all a light cream. The same colour is carried up the staircase walls.

INGERSOLL-RAND CO.'S OFFICES: WAITING HALL.

The general contractors were Messrs. W. F. Blay, Ltd., the sub-contractors being as follows: Rosser and Russell, Ltd. (heating); Higgins and Griffiths, Ltd. (electric lighting); Brasco-Lath Company (Brasco lights); Albany Forge, Wainwright and Waring, Ltd. (wrought-iron grilles to the entrance, the lift enclosure, radiator casings, lamps, and other ironwork); H. H. Martyn, Ltd. (carving); Durato Asbestos Flooring Co., Ltd. (artificial floors). The existing stone steps and landings were carried out in "Terrazzo" by Messrs. Fenning & Co., Ltd.

INGERSOLL-RAND CO.'S OFFICES: STAIRCASE AND LIFT ENCLOSURE.

By-laws and Building Regulations

As the officials of certain local authorities have given notice to the members of the National Federation of House Builders that they will only consent to the erection of houses under the conditions imposed by the old by-laws and that the modifications which were allowed during the period of State assistance would not be permitted in future, the Federation Committee took the matter up with the Ministry of Health. The Committee have been met very courteously by the Ministry, and the present position is outlined in the following report of the Secretary to the Federation, Mr. Norman McKellan.

The provisions of the Housing, Town Planning, etc., Act, 1919, Section 24 (2), read as follows: "Where the Local Government Board have approved plans and specifications which in certain respects are inconsistent with the provisions of any building by-laws in force in the district in which the works are to be executed, any proposals for the erection therein of houses and the laying out and construction of new streets which do not form part of a housing scheme to which this section applies may, notwithstanding those provisions, be carried out if the local authority or, on appeal, the Local Government Board are satisfied that they will involve departures from such provisions only to the like extent as in the case of the plans and specifications so approved and that, where such plans and specifications have been approved subject to any conditions, the like conditions will be complied with in the case of proposals to which this sub-section applies."

There is no time limit to this clause, and in any district where a public housing scheme has been approved by the Ministry of Health (late Local Government Board), any house builder who is carrying out a private housing scheme may build to the specification which has been approved by the Ministry for the public housing scheme; this also applies

to the width and construction of roads; in those areas where a Government housing scheme has been approved the builder may build to either the local by-laws or the specification which has been adopted for the housing schemes. If the local authority refuse to permit work to be undertaken under these conditions, the builder can appeal to the Ministry of Health and the Ministry is under an obligation to insist on this concession being allowed.

Other districts, where no public housing schemes have been carried out, are enabled to approve of the erection of houses which do not conform to their building by-laws under the provisions of Section 25 of the same Act, which read :—

"1. Notwithstanding the provisions of any building by-laws, a local authority may, during a period of three years from the passing of this Act, consent to the erection and use for human habitation of any buildings erected or proposed to be erected in accordance with any regulations made by the Local Government Board.

"2. The local authority may attach to their consent any conditions which they may deem proper with regard to the situation, sanitary arrangements, and protection against fire of such buildings, and may fix and from time to time extend the period during which such buildings shall be allowed to be used for human habitation.

"3. If any person feels aggrieved by the neglect or refusal of the local authority to give such consent or by the conditions on which such consent is given, or as to the period allowed for the use of such buildings for human habitation, he may appeal to the Local Government Board, whose decision shall be final, and shall have effect as if it were the decision of the local authority, provided that the Board may, before considering any such appeal, require the appellant to deposit such sum, not exceeding ten pounds, to cover the costs of appeal as may be fixed by rules to be made by them."

This Section expires on July 31, 1922, which is three years from the passing of the Act, but we have the assurance of the Minister of Health that it is to be extended for a further period. The apparent intention of this Section is to permit the erection of houses of other modes of construction approved by the Ministry which are not included in the housing scheme in the locality, and as some modes of construction are for houses of a temporary character, the local authority is empowered to attach a time limit to the habitation certificate. The Ministry of Health have made regulations under this Section providing for certain specified requirements relating to foundations and protection from fire.

If you have any difficulty in obtaining the sanction of your local authority to erect houses according to the specification of the Ministry, I shall be glad to hear from you and the Committee will assist you to arrange the matter, but it is hoped that no member will seek to take advantage of specifications which are obviously unsound in construction.

Perhaps the most important effect of the modification of the existing by-law regulations by the Government housing schemes will prove to be in the cost of road-making. The narrow carriage-way and the economical specifications which have been adopted are all to the good, and when the density of the houses is less than twenty to the acre, the traffic is so light that local authorities will find the expense of upkeep after the road has been "adopted" very reasonable. On the laying out of an estate, however, the builder will have to take into account certain roads that are obviously of importance as through roads, which will require a wider carriage-way and possibly a more substantial make up. There should be no difficulty in arranging this with the local authority however, and in arriving at a layout which is economical and practical and which will reduce the road-making costs to pre-war figures at least.

Zoning Proposals

Mr. Raymond Unwin, F.R.I.B.A., past president T.P.I., in reading a paper before the Town Planning Institute on "Zoning Proposals," said that the attempt to summarize the five papers dealing with various aspects of the subject of zoning which had been read that session, together with the interesting discussions which had followed them, was no easy matter. Mr. Pepler introduced the whole subject comprehensively, and defined the purpose of that discussion with great clearness. Mr. Orr illustrated the matter in an intensive study, of great value, dealing with certain districts in a London borough; he particularly showed how zoning may check the creation of slums, and assist in their clearance, and in rehousing. Mr. Parker dealt with zoning in relation to amenities and dwelt especially on the importance of limiting the excessive height of buildings; while Mr. Gaunt clearly explained the economic value of zoning in securing the development of efficient industrial areas adapted to modern needs. Mr. Baxendale explained the effect of zoning on land values, and helped them to realize both the importance of this aspect of the subject and the responsibility which rests upon the framers of zoning regulations to consider the extent to which they may injure or improve those values. Sir Edward Harper in the discussion completed the survey of the subject by insisting that the power of zoning must be in the right hands, the elected local authority, and that a proper system of taxation, by taking from the owner who benefits to relieve the one who loses, should be able to remove any unfairness resulting from zoning regulation.

Mr. Raymond Unwin said that the aim of the discussion was to determine and state the main principles which should govern the practice of zoning; to consider how far these could be applied under existing town planning powers; and what additional powers would be required. He assumed that it was no longer necessary to argue in favour of zoning. Having stated the purposes which zoning regulations might effect, and referring to the conditions which must be complied with, and the limits which must be respected if success was to be attained, he said that it would seem that satisfactory zoning regulations could be framed along the following lines :—

1. The predominating character of each area should be defined, dependent on the general use to which the majority of the buildings in that area are to be devoted. The owners should have th right to erect within that area all build ings which are adapted to the use o range of uses consistent with this pre dominant character.

2. There should be provided some dis cretion for allowing the erection of build ings which, though they may not fal exactly within the general use character are clearly consistent with it, required ir connection with it, or at any rate no likely in any way to interfere with it Such buildings might be allowed to b erected only with the expressed consen of the local council, with perhaps ar appeal by an official owner.

3. There will be other buildings as already explained, the use of which may be generally inconsistent with the predominant character, but limited numbers of which may be necessary for the local needs of a large area of one predominating character. The sanctioning and placing of these cannot safely be left to the unguided discretion of any authority Some special provision is needful to protect both the owners of land and the community from injury; and the best provision appears to me to be the requirement of a detailed plan of development and zoning for the areas likely to be affectd by any such sanction. It is not possible to make exceptions wisely in regard to this class of building except on the basis of a plan, showing exactly what is proposed, and, if necessary, allotting a defined area in which this and other similar buildings may be located. In connection with this class of exceptional building, I think it is desirable that there should be an appeal on the part of all interested from the decision of the local council to some outside and impartial body. It should be one having an accumulated technical experience, together with a detachment from temporary and local interests or prejudices, if it is to be competent to give guidance in a matter of this kind, in which the apparent interests of the owners and the local governing body may be in conflict and may both be at variance with the best interests of the community.

4. There will be classes of building which may legitimately be excluded from certain areas altogether. This method of zoning would provide very great elasticity and at the same time would set up a quite definite condition. The owners and the public would know that within each area certain buildings might be erected; and in some of the areas where a high degree of restriction did not appear to be necessary the range of buildings to be erected might be defined merely by the exclusion of certain classes of building. On the other hand, in other areas it might be defined by permitting the erection of certain defined classes. They would know further that an additional range of buildings could be erected with the permission of the council; and that in addition, a still further class of buildings might be admitted in limited areas defined by a more detailed lay-out and zone plan, which would be subject to consideration and appeal on the part of those interested. They would know finally that certain classes of building were excluded altogether, and could not be erected except by the revoking or varying of the town planning scheme, and a consequent reconsideration of the whole question.

List of Competitions Open

Date of Delivery.	Competition.
une 12–17	Owen Jones and Mulready Prizes for students for architectural decoration, woodwork and cabinet work, textiles. Apply Secretary, The Royal Society of Arts, John Street, W.C.2.
une 17	War Memorial to be erected in Christ Church Park, Ipswich. Apply Joint Honorary Secretary, Mr. G. M. B. Langdon, at 12 Tavern Street, Ipswich. Assessor, Mr. Henry V. Ashley, F.R.I.B.A.
une 30	Museum and Institute as war memorial for City of Auckland, New Zealand. Cost £170,000. Premiums amount to £1,000. Apply Secretary, R.I.B.A.
	Through the courtesy of a New Zealand architect, now in London, three photographs showing different aspects of the site of the Auckland War Memorial have been lent to the R.I.B.A. They are exhibited in the R.I.B.A. Library for the benefit of competitors.
uly 15	Poster to be used at the R.I.B.A. for advertising the exhibitions of drawings which are held from time to time in the Galleries. Premium £5 5s. Assessors—Mr. Halsey Ricardo, F.R.I.B.A., Professor S. D. Adshead, M.A.,F.R.I.B.A., and Mr. Alfred Cox, F.R.I.B.A. Apply Secretary, R.I.B.A., 9 Conduit St., W.1.
	The promoters of the Newport War Memorial Competition having satisfactorily revised the conditions, members of the R.I.B.A. and The Society of Architects are at liberty to take part if they desire to do so.
	The President of the R.I.B.A. has nominated Professor C. H. Reilly, O.B.E., F.R.I.B.A., as assessor in the Dewsbury War Memorial Competition.
	The President of the R.I.B.A. has nominated Mr. Alfred W. S. Cross, Vice-President, R.I.B.A., as assessor in the Lytham Public Hall and Baths Competition.

Auckland War Memorial Competition

Appended is the third and final set f questions and answers which have een issued by the promoters in connec- on with the Auckland War Memorial ompetition. Designs are to be shipped om London not later than by first mail oat after June 30. The answer to each uestion is given in parentheses.

53. Floor Areas.—The area of the first oor, according to sizes given, is approxi- ately 40,000 sq. ft. That of the ground oor, including all necessary corridors, orks out at roughly 37,000. May this fference of 3,000 sq. ft. be added to the ea required for future development on ie ground floor or be given to extra orage space? (Left to discretion of mpetitors.)

54. Public Lavatories.—Are these re- ired only on the second floor? (In swer to Question No. 7; "lavatories, c., disposed in convenient positions" eans that they are to be disposed upon e several floors as required for the use the staff and the public. But lava- ries for the use of the public may be on one floor only if competitors so sire.)

55. For what loads are the floors to be signed? (For the purpose of the com- tition the super-imposed load of each or may be assumed as that required by e L.C.C. By-laws for Museum Buildings, z., 225 lb. per sq. ft.)

56. "Maori Hall parallel with Maori urt." Does this mean length to length may the Court be width to length? The major axes of the Maori Hall with Maori Court must be parallel to each ier.")

57. May library be entered through Herbarium? (Yes, but it is preferred that the Herbarium shall be entered from the library.)

58. "Doors between adjacent exhibition halls are seldom required." Should this read "openings" instead of "doors"? (No.)

59. Could you give another wording of answer to Question 25? (No. Answer given appears fully to reply to the question asked while at the same time giving full scope to the discretion of the competitors.)

60. "Communication between various halls on same floor should be clear and evident and entrances large and roomy." Do you prefer galleries to be "en suite" or would it be better for them to open from the Central Halls and short corridors? (Requirements of circulation in museum planning call for halls "en suite." "Short corridors" are to be avoided.)

61. What weight are the various floors to carry? (See answer to Question No. 55.)

62. Will stanchions be allowed in the 60 ft. galleries? (Yes. In the museum halls where the span calls for intermediate support it is desired that there shall be two such supports, each of which should be placed at approximately one quarter the span from the adjoining wall. In the main entrance hall, the central hall or vestibule, the Central War Memorial Hall and the Hall of Memories, the omission or use and disposition of intermediate supports is left entirely to the discretion of the competitor.)

63. What would be the height of the largest object in the children's room? (This cannot be given.)

64. Can either the major or minor axes of the Maori Court be parallel with the Maori Hall? (See answer to Question No. 56.)

65. "The general lighting of the museum halls must be from the sides." (a) Does this condition apply to the Central War Memorial Hall, the Hall of Memory, and the Hall for the exhibition of War trophies? (b) Does this condition exclude lighting of the museum halls from the ends? (a) The halls named may be lighted entirely according to the discretion of the competitor. (b) The side lighting of the museum halls may be supplemented by end lighting where this is rendered quite necessary by the planning arrangement adopted.)

66. In my scheme I have arranged the 80 ft. of Maori Court to adjoin the Maori Hall: Would that be considered parallel? (See answer No. 56.)

67. It is desired to have an open space down the centre of the three central halls? That is, the two upper halls would consist of a gallery around, and well in centre. (Left to discretion of competitor.)

68. Is it mandatory that the special arrangement of Courts and Halls indicated in the answers to questions, particularly No. 7, be adhered to; or, providing proper correlation of the rooms of various departments were maintained, would some other arrangement, if submitted, receive consideration, as suggested in the NOTE at the head of the Schedule of Requirements? (Answer No. 45, third paragraph, makes it clear that the competitor has the option of varying the arrangement of halls to suit his planning scheme, if he considers it quite necessary, although the arrangement indicated is that desired by the promoters.)

69. Would it be permissible to use top lighting only for the centre War Memorial Hall and the Halls of Memory and Trophies? (See answer 65 (a).)

70. Is it desirable in your Council's opinion that the Children's Museum should be separate and distinct from the other halls? (Children's Museum should be, as indicated in answer 7, in the vicinity of administrative offices for the purposes of supervision.)

71. Does the Committee consider a tower or dome an essential feature to the memorial side of the design, or can that be left to the discretion of the competitor? (Left to the discretion of the competitor.)

72. "Open Courts" are suggested as necessary to ensure equal lighting. Does this mean courts open on one side to the domain or internal courts open to the sky? (Either, according to design adopted.)

73. Is it intended that the passenger lifts and stairway should discharge directly into the Central War Memorial Hall, or would a separate stairway hall be desirable? (Left to discretion of competitor.)

74. Would access to library through one of the exhibition halls be permitted? (Yes.)

75. Must halls for future development, War Trophies, and N.Z. Natural History, have equal lighting on both sides? (Regarding War Trophies Hall see answer No. 65 (a). Regarding other halls mentioned these must be lighted from both sides.)

76. Is side lighting required on opposite sides of all halls over 3,000 sq. ft. in area, except Lecture Hall? (Yes, with exceptions noted in answer No. 65 (a).)

77. Are piers or columns prohibited in any halls other than Lecture Hall and Maori Court? (No. See answer No. 62.)

78. Is it mandatory that pier or column treatment between Maori Court and Maori Hall should extend for full length of Maori Court? (Yes. See answer No. 56.)

79. Are corridors necessary for circulation of the public between halls, or would openings in walls between halls be sufficient for this purpose? (See answer to Question No. 60.)

80. Is it allowable to indicate on the drawings, the suggested locations of cases or other exhibits in the various halls? (No.)

81. Referring to your answer to Question 17 in memorandum of December 23 concerning the height of the terrace upon which the building will stand, I presume it is permissible to cut down all surrounding land which is higher than this level, especially in the roadway indicated on the north and south of the museum site. Is this correct? (Yes.)

Coming Events

Friday, June 2.

The Art Workers Guild.—Meeting at 6 Queen Square, W.C.1. "Co-operation of the Architect and Craftsman." 8 p.m.

Saturday, June 3.

Edinburgh Architectural Association.—Visit to Edinburgh Corporation Gas Works, Granton.

Northern Architectural Association.—Sketching meeting at Finchdale Abbey.

Wednesday, June 7.

Northern Architectural Association.—Evening meeting—Tynemouth Priory and other buildings.

The Franco-British Union of Architects

We have received from the R.I.B.A. a report by Mr. H. P. Cart de Lafontaine of the second annual conference and general meeting of the Franco-British Union of Architects held recently in Paris. A report of this meeting was specially contributed to the Journal by Mr. H. Bartle Cox, A.R.I.B.A. (Member F.B.U.A.), and published in our last issue. The report just received records that since the first general meeting of the Union, which was held in London, the following members have been elected :—

British Section.—S. D. Adshead, Herbert Baker, F. Billerey, H. C. Bradshaw, M. Chaures, T. E. Cooper, E. G. Dawber, C. A. Farey, H. M. Fletcher, J. G. S. Gibson, J. Keppie, H. V. Lanchester, Sir E. L. Lutyens, L. de Soissons, R. Unwin, E. P. Warren, M. E. Webb, H. Worthington, P. Worthington, T. P. Bennett, B. Cox, J. S. Forbes, H. A. Hall, S. Hamp, J. Murray, T. S. Tait, J. D. Tate.

French Section. — Arfvidson, Blanchard, Chaussemiche, Chrétien-Lalanne, Coutan, Danis, Deglane, Duquesne, Devienne, Febvre, Formige, père, Formige, J., Heraud, Hebrard, Jalabert, Hulot, J., Lamaiziere, Legros, Lisch, Mewès, Normand, P., Roussi, Templier.

Professor Gardner at the R.I.B.A.

The second of this year's series of public lectures was given at the R.I.B.A. last Thursday, when Professor Ernest Gardner (Yates Professor of Archæology, University College) transported his audience to ancient Greece.

Greek public buildings were the particular subject of his discourse, and a number of lantern slides showed plans and reconstructions of temples, senate houses, market-places, and the like.

Adaptability, said Professor Gardner, was one of the main characteristics of Greek architecture. The Greek lived mainly in public, and buildings were erected for all sorts of political, social, and athletic purposes, as well as religious. Public buildings were of unparalleled magnificence. Streets were narrow, but relief was given by the reservation of open spaces, which were considered an essential part of town planning. Temples were built in some conspicuous place; many outside the walls. They could be "easily seen, but not too easily approached."

Some of the ancient town planning lay-outs, dating from the fourth century, were a model for the present day. Temples were not places for congregational worship, which took place in the open air. They were used for housing statues and offerings, and were undoubtedly evolved from palace and courtyard.

Berks, Bucks and Oxon Architectural Association

The second annual meeting of the Berks, Bucks, and Oxon Architectural Association has been held at Oxford. The members of the Oxford Society entertained their confrères from Berks and Bucks to luncheon and tea, and conducted a large party over several of the most interesting colleges. Mr. Harold Rogers, M.A., the president, acted as guide, and his scholarly explanations added much to the enjoyment of the party. The Provost and Fellows of Oriel College kindly lent the College Hall for the meeting.

The following officers were elected : President, Mr. E. P. Warren, F.S.A., F.R.I.B.A.; Vice-Presidents, Messrs. H. S. Rogers, M.A. (Oxon), C. S. Smith, F.R.I.B.A. (Berks), and H. Passmore, A.R.I.B.A. (Bucks); Hon. Auditor, Mr. R. A. Rix, A.R.I.B.A.; Hon. Treasurer, Mr. T. T. Cumming, A.R.I.B.A.; Hon. Secretary, Mr. H. Hutt, A.R.I.B.A.

The annual report and balance sheet were adopted, and the President delivered an address which will be published "in extenso" in the Year Book. The Association has 125 members, and is to be congratulated on its rapid growth and successful work.

New Inventions

Latest Patent Applications.

13010.—Attwater, A. H.—Concrete cavity building block. May 9.

13392.—Kellow, F. J.—Method of constructing collapsible buildings. May 12.

13318.—Leese, L. F. W.—Building unit, and method of erecting floors or roofs and ceilings therewith May 11.

Specifications Published.

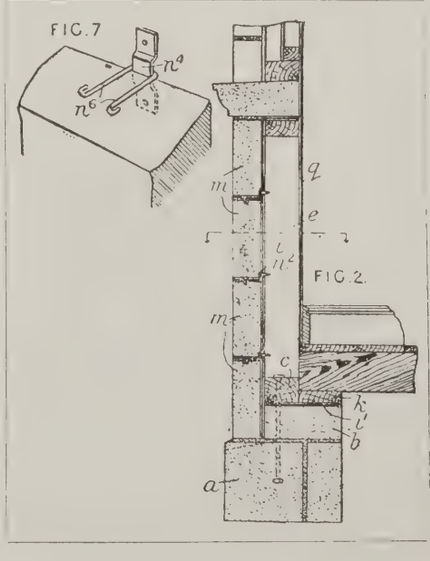
178929.—Matthews, J. F.—Chimneys for buildings or other structure.

178987.—Tawse, G. A.—Reinforcement for use in concrete construction.

Abstract Published.

177350.—Walls; wall ties.—Hamilton, H. A., Thomas Street, and Twigg, F. J., Park View, both in Waterford.—Concrete slabs *m* are secured to a wooden framing *c*, *e* by clips n^2, which are secured to the uprights and engage in grooves in the slabs; or hooks n^6 laid in the joints may engage clips n^4. The framing is protected by bituminous sheeting *i*, and weeping holes are provided on the vertical joints of the slabs for the escape of condensation. The framing is covered on the interior with fibrous plaster sheets *q*. The foundation consists of concrete blocks *a*, *b*, and a double bituminous sheet i^1 is laid under the sole *c* and tassel *k*.

FIG. 7



The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, W.C. 2, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each

Leeds and West Yorkshire Architectural Society

Mr. Eric Morley, of Bradford, a partner in the firm of Messrs. W. J. Morley and Son, architects, has been elected president of the Leeds and West Yorkshire Architectural Society. Mr. Morley is the first architect practising outside Leeds invited to accept the presidency of the society. Educated at Bradford Grammar School, Mr. Morley entered his father's office as a youth, and eventually qualified as an architect and surveyor. He is a Fellow of the R.I.B.A. and a Fellow (and medallist) of the Surveyors' Institution During the war he served for nearly four years as a captain in the Royal Engineers and was wounded. The practice with which Mr. Morley is associated was founded by his father about forty years ago. Many notable works have been carried through under the direction of the firm in Bradford and district, including the Children's Home at Bramhope, and, recently, the extensive alterations at the Bradford Church Institute and the Anglo-South American Bank building alterations.

Henry Saxon Snell Prize

Mr. A. Saxon Snell asks us to draw the attention of readers to the subject set for this prize for the current year, viz.: "A Maternity Home and Infant Welfare Centre." He says: In the cause of social progress these institutions are bound to have an importance in the future which is as yet little realized. Although a comparatively small number of specially designed buildings have been erected (and these are to some extent tentative) most health authorities have established homes, if only in converted premises. In due course, properly designed buildings will be required all over the country, and those architects who have made a study of the subject may well hope to reap the benefit. In this connection, the prize offers a good opportunity for at least the commencement of such a study, and it is hoped that many practising architects will enter as competitors. Indeed, this is much to be desired. A memorandum setting forth in detail the requirements and also some information of buildings and writings for reference has been prepared and approved by the R.I.B.A. Board of Architectural Education, 9 Conduit Street, S.W.1. A copy of this will be sent to each competitor. The monetary value of the prize has been raised this year to £60.

The Week's News

Wandsworth Bridge.

Efforts are being made to have Wandsworth Bridge rebuilt.

Housing at Wandsworth.

The latest tenders for building municipal houses at Wandsworth are for £441 each.

K.R.R.C. Memorial.

Prince Henry has unveiled a war memorial at Winchester Cathedral to the King's Royal Rifle Corps.

Proposed Baths for Norwood.

Lambeth Borough Council are considering the building of public baths at Norwood if they can secure suitable land.

Architects' Change of Address.

Messrs. Thoms and Wilkie, FF.R.I.B.A. have moved to new offices at 21 South Tay Street, Dundee.

Public Baths for Bishop Stortford.

Estimates are to be prepared for the conversion of a piece of water at the rear of the Council House into public open-air baths.

The New Tivoli.

Building operations are about to commence on the old Tivoli site, where a great theatre, which can be used either as a cinema or music-hall, is to be erected.

Old Bailey Acoustic Properties.

A glass structure is being erected across the interior of the dome over the principal Court at the Old Bailey to improve its acoustic properties.

Promenade for Tottenham.

Tottenham Urban District Council have decided to construct a promenade by the River Lee and tennis courts at a cost of £17,000.

New Window for St. Gabriel's, Cricklewood.

A stained-glass window for the north aisle of St. Gabriel's, Cricklewood, N.W., has been designed and made by Mr. Martin Travers.

R.I.B.A. Special War Examination.

The centres for the R.I.B.A. Special War Examination, to be held from July 3 to 7, will be London and Manchester.

Plumbers' Conference.

The annual conference of delegates of the Institute of Plumbers has been held in Newcastle. Mr. Bertram D. Helyer, of London, presided, and the proceedings were conducted in private.

Mr. Edward Penton and Mr. G. H. Kitchin.

The President of the R.I.B.A. has appointed Mr. Gilbert H. Lovegrove, F.R.I.B.A., arbitrator in this matter.

Abbey Window to Fallen Airmen.

The dedication of a war memorial window to officers and men of the British Flying Services has taken place in Westminster Abbey. The window is the work of Mr. Harry Brylls.

London Street Improvements.

The City Corporation are recommending a street improvement costing £26,000 in Gresham Street and Wood Street, subject to the London County Council paying half the cost.

New Hospital for Reims.

Mr. Myron Herrick, the American Ambassador in Paris, has laid the foundation stone at Reims of a hospital which is to be built and endowed out of the American fund for French wounded.

Sussex Bridge to be Rebuilt.

The picturesque suspension bridge, which carries the main Brighton-Worthing road over the River Adur at Shoreham, is to be rebuilt to meet the demands of modern traffic. The work will probably cost £32,482.

Architectural Partnership.

Mr. Bernard Dangerfield, M.C., A.R.I.B.A., is resigning his position as assistant architect at H.M. Office of Works to enter into partnership with Mr. H. R. Coales, A.R.I.B.A., at Guelph, Ontario.

The Late Mr. Walter Strudwick.

Mr. Walter Strudwick, father of the Surrey and England cricketer, has died at Mitcham, aged eighty-two. He was an estate agent and builder, and had worked for the same property owner for fifty-three years. Mr. Strudwick could trace back his family in Mitcham for 200 years.

Reduced Railway Rates.

Some important reductions have been made by the English and Welsh Railway Companies in the rates for traffic conveyed by merchandise trains. Many materials used by the building and engineering trades are affected. Full details of the reductions may be obtained from the Railway Clearing House, Seymour Street, Euston Square, London, N.W.1.

Five Hundred Years Old Cottage.

Arrangements have been made for the removal bodily 137 ft. back from its present site in Malden Road, Cheam, Surrey, of a quaint five-centuries-old cottage, so that a road-widening scheme may be carried out. The cottage was recently bought by the rural council to save it from demolition.

Dry Dock for the Majestic.

Southampton Harbour Board have sanctioned a site for a floating dry dock capable of dry-docking the Majestic, for which the London and South-Western Railway Company propose to provide. Alderman Kimber, in moving the report, expressed the hope that the dock would be constructed in Southampton, adding that it was no secret that the necessary dredging and construction of the dock would cost something over three-quarters of a million pounds.

United States Customs Tariff.

A reprint of the essential parts of the proposed United States Customs Tariff, as reported by the Senate Finance Committee to the United States Senate has been issued as a special supplement to the "Board of Trade Journal." The Bill as it has come from the Senate differs in many important respects from the House Bill as published in a supplement to that "Journal" of August 4 last.

Housing and the Geddes Proposal.

The proposal of the Geddes Committee that the houses provided by local authorities under their housing schemes shall be sold has been discussed at representative conferences of local authorities convened by the National Housing and Town Planning Council in Scotland, Lancashire, Yorkshire, the West Midlands, the West of England, and Greater London. At all these conferences the representatives present have with practical unanimity decided that the best course to adopt is that of adhering to the original purpose of letting the houses to ex-Service men and large families at rents which they can afford to pay, and not selling the houses as proposed by the Geddes Committee.

Tunnel Under Tees?

At a meeting of the South Tees-side Joint Town Planning Committee a plan was submitted showing the main trunk road, commencing near the racecourse at Thornaby. Messrs. Abercrombie and Adshead reported they had given careful consideration to the scheme which had been suggested for crossing the railway and the River Tees east of Thornaby, and by so doing providing a direct connection with the north, and avoiding the congestion of Stockton. Having regard to the great cost of such a scheme and the comparative directness of the road through Stockton, the scheme of a bridge was not one they could very strongly support. A suggestion was made to tunnel the river at Newport, or near the Transporter Bridge.

Fifty years in Architectural Practice.

On June 2 Mr. Charles Henry Heathcote, F.R.I.B.A., of Manchester, will have completed fifty years' active architectural practice in that, his native, city. Born in 1850, Mr. Heathcote served his articles with the late Mr. Charles Hanson, of Bristol and Clifton. While still in his pupilage he was awarded, in 1869, the silver medal of the R.I.B.A. for the best series of architectural drawings, from measurements, illustrative of English church architecture. Returning to Manchester in 1871, Mr. Heathcote commenced practice there in the following year. During the course of his long professional career Mr. Heathcote has designed and superintended the erection of numerous important commercial and other buildings, including banks and insurance offices for the following: Lloyds Bank, London County, Westminster, and Parr's Bank, Lancashire and Yorkshire Bank, National Provincial Bank, Commercial Union Insurance Company, Alliance Insurance Company, Scottish Amicable,

Norwich Union, Employers' Liability, Vulcan, Economic, Eagle, the Royal London Friendly, and others.

Royal Sanitary Institute.

From July 24 to 29 the thirty-third congress of the Royal Sanitary Institute will be held at Bournemouth under the presidency of Major-General the Rt. Hon. J. E. B. Seely, C.B., C.M.G., P.C., D.S.O., M.P. The congress will be divided into five sections, one of which will be devoted to engineering and architecture. The president of this section is Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A.; the recording secretary is Mr. A. Saxon Snell, F.R.I.B.A.; and the local secretaries are Messrs. E. P. Dolamore, F.S.I., and Samuel J. Newman, F.R.I.B.A. In connection with the congress an exhibition is to be held of apparatus and appliances relating to Health and domestic use. A copy of the preliminary programme of the congress may be obtained from the secretary, Mr. E. White Wallis, F.S.S., 90 Buckingham Palace Road, S.W.1.

Incorporated Church Building Society.

At the monthly meeting of the Incorporated Church Building Society, the following grants were made: Towards rebuilding the church of St. Giles, Rowley Regis, Staffs, £200; towards enlarging or repairing the churches at Charlton Adam, St. Peter and St. Paul, Somerset, £25; Howdon Panns, St. Paul, Northumberland £50; Ivychurch, St. George, Kent, £20; St. John's Wood, St. John, London, £50; Stoke Courcy, St. Andrew, Somerset, £10; and Hanslope, St. James, Bucks, £100. Grants were also made from the Mission Buildings Fund towards the erection of St. Matthew's Church, Kingscroft, Staffs, £75; and reseating the church of St. John the Evangelist, Cwmcarn, Mon., £15. The following grants were also paid for works completed at Llanrothal, St. John the Baptist, Herefords., £25; Southchurch, Christ Church, Essex, £120; and St. Eval, Cornwall, £30. In addition to the above, £360 was paid towards small repairs to twenty-two other churches.

"G.E.C. Freezor" Fan Campaign.

This season the General Electric Company, Ltd., are launching a "Freezor" fan campaign. As a preliminary the company have just issued a new booklet, V. 2754, which gives full descriptions of the numerous types in which this fan may be obtained, together with revised prices which, we notice, represent very substantial reductions. Among the many good things contained in the booklet is a complete new range of oscillating fans. These represent an entirely new departure in oscillating fan construction, and are the only fans of their kind manufactured in England. They are fitted with a simple and efficient oscillating mechanism. The arc of travel can be adjusted between the limits of 110 deg. and zero, and a slipping clutch is provided which allows the blades to continue to revolve even when the oscillating mechanism is prevented from operating by some external obstruction. All the fans are manufactured at the company's "Freezor" fan works at Witton, and are produced on mass production lines, so that interchangeability of parts is secured. Every part of every fan is subjected to severe inspection and test with the result that the G.E.C. are able to guarantee every "Freezor" fan for twelve months. Copies of the booklet can be obtained on application to Magnet House, Kingsway, or at any of the company's provincial branches.

International Theatre Exhibition.

The International Theatre Exhibition at the Victoria and Albert Museum will be open free daily to the public from June 3 to July 16. The large expenses of the exhibition are being met entirely by private subscription, and subscribers of £1 and upwards will receive two tickets covering admission to the private view on June 2 at 3 p.m., and to a course of six lectures which will be given in the six weeks during which the exhibition is open. Subscriptions should be sent to Lord Howard de Walden, The British Drama League, 10 King Street, W.C.2.

The lectures to be given at the Victoria and Albert Museum at 5 p.m. are as follows:—

Tuesday, June 6.

Mr. Gordon Craig: "The International Theatre." Chairman: Sir Cecil Smith.

Tuesday, June 13.

Mr. H. Granville-Barker: Co-operation in the Theatre." Chairman: Lord Crawford.

Thursday, June 22.

Mr. George Bernard Shaw: "The Evolution of the Theatre." Chairman: Miss Lena Ashwell.

Tuesday, June 27.

Sir John Martin Harvey: "The Actor in the Theatre." Chairman: Viscount Burnham.

Tuesday, July 4.

Mr. John Drinkwater: "The Dramatist in the Theatre."

Tuesday, July 11.

Mr. Basil Dean: "What goes on Behind the Scenes." Chairman: Mr. Norman Wilkinson.

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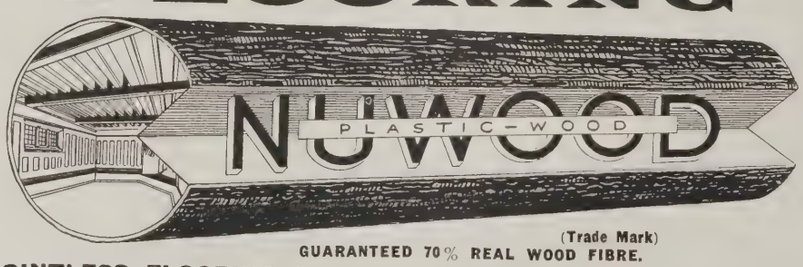

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Wednesday, June 7, 1922. Vol. LV. No. 1431

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

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G. GILBERT SCOTT, R.A., ARCHITECT.

27-29 Tothill Street, Westminster, S.W.1.

A Study for a Station of the Cross

From a Drawing by Frank Brangwyn, R.A.

In the article which accompanies this set of the Stations of the Cross the writer describes Mr. Brangwyn's reasons for putting the figures of his pictures into modern clothes. In this drawing it will be seen that the figures following Christ are British soldiers, while the crowd sketched in the background includes a workman with a bag of tools, more soldiers, and a man in a silk hat. Above the drawing are two little thumb-nail sketches which are interesting as displaying the evolution of the composition

THE
ARCHITECTS' JOURNAL
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The Breakdown of the Builders' Parliament

MR. ARTHUR HENDERSON'S well-intentioned advocacy of an Industrial Parliament had an untoward sequel. Independently of that proposal, but nevertheless forming a significant commentary on it, the organized employers determined to withdraw from the Industrial Council for the Building Industry, on which has been popularly conferred the short title of the Builders' Parliament. This ostentatious withdrawal the Council can hardly survive, and with its collapse fades the hope that it would be the means of stabilizing an industry that is sorely in need of this attention—might, indeed, have had the supreme honour and satisfaction of illuminating the pathway to general industrial peace.

Lamentable indeed it is to have to confess it, but the Builders' Parliament must be impartially written down as a complete failure. It has achieved nothing, and has established no principle. Unfortunately, however, it has demonstrated yet again what was already too well ascertained—that, generally speaking, employers and employed seem to delight in showing themselves as mutually repugnant as oil and water.

It was the assigned function of the Builders' Parliament to legislate in a bland and an impartial spirit and a judicial temper for the general welfare of the great building industry. How and to what extent has it performed this duty? It has mainly spent its precious time, and wasted its fine opportunities, in paltry and sordid bickering and squabbling. It has not interested itself in the calm discussion of ways and means for the elevation and betterment of the industry as a whole, but has revelled in acrimonious disputes about comparatively unimportant labour and wages conditions. Its one theme seems to have been the endless and wearisome question of whether labour should produce more work for less pay, or vice versa, and on such a monotonous theme rancour attends as an inevitable relief from excessive boredom. For those persons who like ceaseless discord, the Builders' Parliament must have been an unfailing source of unholy joy, untinged with any marked intrusion of amity and goodwill.

Even with the aid of politics, the Mother of Parliaments itself is hardly less hopelessly bad-tempered or more barren of useful results. In Punch's "Essence of Parliament" the frequent record was "Business done—none." If this formula were adopted for the minutes of the Builders' Parliament, it would stand in but little need of occasional variation. For all the good the Builders' Parliament has ever done, it might just as well never have existed—better, indeed, for it has been the means of wasting much time, temper, and cash. Certainly it may be credited with the negative virtue of showing clearly that business cannot be done on the particular lines laid down for the Parliament, and the inference arises that some other method must be found of harmonizing the conflicting claims of capital and labour; or if such claims cannot by any possible means be brought into absolute agreement, then means of compromise must be found.

That some *modus vivendi* will soon be found cannot be doubted. A way out of the *impasse* at which industry in general has arrived is being earnestly sought. Lord Morris, for example, commenting in "The Times" on Mr. Arthur Henderson's proposal (to which reference was made in the opening paragraph of this article) for an Industrial Parliament, agrees with the contention that such a body should be independent of any official connection with the State; for, he says, "rightly or wrongly, State interference in industry is suspect." Adding that "the failure of the attempt to set up a National Industrial Conference in 1919 is still remembered with some bitterness," Lord Morris pertinently asks: "Is there anything to prevent the Industrial League and Council itself from taking a bold step and arranging the preliminaries?"

One snatches eagerly at even a forlorn hope of securing industrial peace, whether by means of the Industrial Parliament advocated by Mr. J. H. Thomas, Sir William Noble, and Mr. J. R. Clynes, or by means of the ten years' industrial truce suggested by Mr. Frank Hodges; or, again, through the efforts of the Industrial League and Council.

There arises always, as Mr. J. C. Gould reminds us in a further letter on the same subject, at each conclave the sinister spectre of insincerity of purpose. Insubstantial bogey though this may be, it is effectual in scaring away mutual trustfulness. Employers can never shake off the haunting fear that, as Mr. Gould puts it, workers aim at "complete abolition of capitalism," while workers strongly though groundlessly suspect that employers are trying to smash the trade unions. Mr. Gould comments: "Is anyone foolish enough to imagine that any honest contribution towards industrial peace would be made in an Industrial Parliament or elsewhere by leaders apparently pledged to a war of extinction on their employers?"

Such exaggerated charges of insincerity, made now by one side and now by the other, make deadly mischief, and are usually based on unwarrantable misunderstandings. Yet it is useful to say once again that "capitalism" is the abuse of capital, just as trade-unionism is a perversion of the functions of the trade unions. But these nice distinctions in terms are too subtle to be of much practical value; and there is no doubt that they are at the root of fatal misunderstandings such as those that have wrecked the Building Industries Council.

The fundamental cause of failure in the Builders' Parliament is an unsound constitution, repeating the fatal flaw in the Conciliation Boards. With six suspicious men on one side and half-a-dozen on the other, what but deadlock can ensue on every contentious issue? This is what has happened in the Builders' Parliament, in spite of the slight infusion of architectural blood by which, as an afterthought, it was sought to introduce the necessary resolvent. These steps should have been taken at the outset. The architects should have been more numerous. Some critics would say that those who were appointed should have been more energetic—that neither by numbers nor by weight have they made their presence felt sufficiently. They must often have thought it a sad waste of time to attend meetings at which genuine discussion of building-industry issues of mutual interest was less frequent

than the persistent and often acrimonious assertion of purely selfish and sectional interests. Both sides have shown a marked tendency to hector and domineer and to impute bad faith. This is not business. It is in reality no better than a wanton and frivolous form of sport, in which, in these hard times, the industry really cannot afford to indulge.

Although the Builders' Parliament has to be written down as a costly experiment that has indisputably failed, there is no need to abandon utterly its root idea. If the Building industry is to prosper, employers and employed must find out a more excellent way of working together amicably, effectually, and with mutual fairness and respect, and hence of avoiding the perpetually recurring disputes which have so often devastated it, wasting its profits and injuring its reputation.

Let conference be resumed on a broader and sounder basis. Let there prevail more geniality of temper, more kindly feeling, less distrust and distraction—more of the spirit of give-and-take. Employers and employed must get to realize more clearly that they really should not meet to wrangle and fence, to exhibit bad temper and impute bad faith, as if they were mere politicians, but to deliberate with high seriousness on formidable and pressing economic and industrial problems, and to arrive at wise and equitable conclusions about them.

The recently founded "Quarterly Illustrated of the Incorporation of Architects in Scotland" (to which all architects in England will extend a hearty welcome) has propounded to Northern lights the spacious question, "What's wrong with the world?" Wide as the question is, many tried to answer it. Dr. William Kelly, A.R.S.A., said that "Discord and disorder" reign, "the brood of Hate and War. What," he asks rhetorically, "will resolve the discord and restore order? The action of Love on Life, producing Goodness, Truth, Beauty." Mr. Colin Sinclair believes the trouble to be merely an excess of bad blood in the world's organic system, and he prescribes as the best medicine for it "a mixture of Salts of Anti-selfishness and Spirit of Real Charity in equal proportions." It will be immediately recognized that the diagnosis and the remedy are alike sound. Here we have what Mr. Sinclair quaintly describes as "an old-fashioned remedy, prescribed by a Great Physician 2,000 years ago." Akin to it, but of more secular savour, is the pearl of wisdom that fell from the lips of an American leader of industry speaking in England last week: "I do not want people to work *for* me: I want them to work *with* me." A reformed Builders' Parliament could effect much good if it worked for the industry in the spirit of these citations.

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The A.A. Elections

It is fortunate that the election returns of the Architectural Association are not so exciting as those of the R.I.B.A. A double portion of such intensity would be too hard to be borne in this torrid weather. Luckily the A.A. list is this year, as usual, quite without thrills or frills, and one greets as a relief its sedative effect. Few and uncataclysmic are the changes in the A.A. list; they are produced, not by volcanic violence, but by the gentler agencies of Nature. Without any sort of exciting disturbance, Mr. Stanley Hamp quietly drops into the presidential chair that had been occupied so gracefully by Mr. W. G. Newton; and by an equally smooth transition Mr. L. S. Sullivan and Mr. Gilbert H. Jenkins follow Mr. F. C. Eden and Mr. E. Stanley Hall as Vice-Presidents; Mr. Hall being consoled for his deposition by investiture with the dignity that attaches to an Hon. Treasurer. Mr. M. T. Waterhouse is afforded an opportunity to test for soundness Mr. M. J. Tapper's probable opinion that to be Hon. Editor of the A.A. Journal is to recline on a bed of roses without thorns. All editors enjoy that Elysian experience. Mr. Manning Robertson succeeds Mr. G. G. Wornum as Hon. Librarian. Major Barnes, M.P., again adorns the Council, and conspicuous among the half-dozen new colleagues that the electors have sent him is, we rejoice to see, Mr. H. S. Goodhart-Rendel. Altogether the list of officers and Council of the A.A. is a strong one, and congratulations for those who are elected are tinged with faint regrets that ten very excellent candidates were excluded for the simple but sufficient reason that the seating accommodation is strictly limited, and has to be bestowed by ballot's inexorable but arbitrary decree.

Our Vanishing Art Treasures

The dispersal of art treasures in private ownership by their sale to foreign purchasers was the subject of remark by Sir P. Sassoon in the House of Commons on May 30. He urged that the Treasury should be empowered to make special grants for extraordinary emergencies to the National Gallery, so that the Gallery might be able to acquire by purchase for the nation "some of the finer works of art left in the country." Nothing was said about objects other than those with which the National Gallery is associated. It is as well, however, not to concentrate the public mind exclusively on paintings and sculpture, otherwise we may find all the money being spent (when it becomes available!) on "Blue Boys" and Vandycks, whereas, as every architect knows, private ownership extends to many things that have even a closer relationship to the interiors of stately buildings—fire "surrounds" and furniture, for instance, which frequently come into the hands of rich foreigners to our country's loss. Mr. Hilton Young, Financial Secretary to the Treasury, gave a financial sort of reply. "The export of art treasures," he said, "which were great national assets, must be watched with the deepest regret, but this is not a revenue question. There could be no question of raising any revenue worth considering from the export of art treasures; indeed, the purpose of the measure would be to prevent their export." How obtuse these astute financiers can be. The idea is Sir P. Sassoon's mind was not the raising of revenue, but the prevention of export of works of art that it would be more profitable to keep in the country. But there are none so blind as those who won't see.

The Lighting of Art Galleries

Art galleries can be too brilliantly lighted. The light may even be so plentiful that you cannot see the pictures. Mrs. Helen W. Henderson writes of the room at Hampton Court to which the Mantegnas have been removed: "I paid 2d. for the privilege of admiring my own reflection in the 'mirrors' behind which the pictures are effectively concealed." The lady means the glazing. "Now," she continues, "the intention is excellent, if the judgment is poor, for the room is very light. It is a long, narrow room, and the light comes through a row of, perhaps, eight large side windows, facing, I suppose, due south, for the sun was pouring in through all of them on the day of which I speak. Each window was reflected in its entirety in the glass over the pictures, and each visitor was silhouetted against that reflection as he passed along. It was only where two large double doors occurred in the wall opposite the pictures and taking the place of windows that, against the cool shade they furnished, one could see portions of several canvases. . . . Another great objection to this room for this purpose is its lack of width. It is so narrow that one cannot step far enough back from the pictures to see the pictures as a 'procession,' as was clearly intended." Wren did not design the room as a picture-gallery; no reflections are cast on him. Nor, indeed, on anybody else; for the pictures had to be removed from the semi-darkness in which they formerly stood, and it must have been difficult to find accommodation for them. Besides, in the English climate, obscurity prevails for about nine months out of the year, and an arrangement of blinds would be a sufficient remedy in a season of glare. Nevertheless, Mrs. Henderson raises points that architects will appreciate.

Mr. Frank Brangwyn's Stations of the Cross for the Leper Settlement, Pretoria

By CROSSLEY DAVIES

MR. FRANK BRANGWYN, R.A., has just completed and given to the Roman Catholic Church at a Leper Settlement near Pretoria, South Africa, a set of Stations of the Cross. By courtesy of the artist some of the studies and the finished panels are reproduced here.

The church for which they have been designed has an interesting history. Father Ryan, of Pretoria, the priest in charge of the Roman Catholic lepers, some years ago set out to provide them with a church. He had no money and no material. But the building stands to-day, a memorial to the patience, courage, and vision of one man, and to the sympathy of other men in many parts of the world offered to paint the whole fourteen, as he felt that it would be better that one man should do this and so secure harmony of treatment. The result is this series.

They are painted in tempera on panels about 3 ft. by 4 ft. The designs are by Mr. Brangwyn, but the actual work of reproducing them has been done by other hands. Simple and light in tone, to accord with the simple and light interior, the treatment of the subjects is also severely simple. The artist had in mind the fact that the congregation is made up mostly of Africans to whom the direct would appeal far more than the subtle. It is Mr. Brangwyn's view that the Stations of the Cross are not fit matter for artistic experiments. Their purpose is to remind wor-

TEMPERA PANEL. BY FRANK BRANGWYN, R.A.

for the world's most pitiful outcasts. Father Ryan wrote to all sorts of famous people, hoping to enlist their interest and support. One of the first to help him was General Botha, who did all he could in every way.

The church has been built wholly from gifts. The devoted priest spent years in the prosecution of his world-wide appeal. And now there are few buildings more truly international than this house of worship erected by lepers. Bricks, mortar, timber, even nails—all the materials he needed were sedulously collected by Father Ryan. Australia, the United States, Canada, England, Italy all sent contributions. Among the gifts is a big window from the well-known glass-painter, Hardmuth of Birmingham. Another man gave him an organ.

The building, which is Romanesque in style, was designed by the priest himself. When the building was finished Father Ryan began to plan for its ornamentation. Among the artists he approached was Mr. Brangwyn. He was asked to give one Station of the Cross. Mr. Brangwyn shippers of the Way of Calvary which the Founder of their Faith trod two thousand years ago. They are in their essence illustrations of historic fact. And to depart from tradition in their presentation would be to defeat the very purpose for which they were designed.

Yet a casual glance at the details of some of the panels would suggest a startling departure from the truth. There are here figures of British "Tommies" in steel hats and British labourers in corduroys and shirts. There are men in caps, a workman carries a carpenter's bag, and at least one figure is crowned with an unmistakable silk hat. The women as a rule are not so obviously modern, but there is at least one who is wearing a twentieth-century be-ribboned bit of millinery.

Nevertheless, all this is in strict line of tradition. In bringing into the scenes of Christ's Passion and Death the men and women of to-day Mr. Brangwyn follows the old Italian masters. Almost all the great religious paintings of the Middle Ages, inspired and commissioned by the

Church, represent the Holy Family and the people of their days as Italians in mediæval costumes. The most famous Madonnas are certainly Italian women. The Christ child is not a Jewish baby, but a chubby Roman or Tuscan. There is good reason for this seeming denial of historic fact. It was not a freak of art. It may have been that Italian models and Italian robes pleased the artists best. Yet there is behind the tradition a better justification than this. All artists down the ages have striven to make Christ universal, the ideal man representing all men, and not just a Jewish Messiah. So into the Gospel scenes they have tried to bring the suggestion of the eternal truths of religion. In other words, their aim has been not so much to give a faithfully accurate version of a great event, as to present the spiritual significance of a sacrifice that was and is for all time. The Gospel was as much for Gentile as for Jew. The Cross is a continuing truth and an eternal symbol. It is the essence of the Christian Faith that it is just as possible to crucify Christ to-day as it was when the Jews reviled Him on Calvary. The Crucifixion is not over, but is ever recurring, from day to day and from generation to generation. So the artist puts the men and women of his own time on the canvas to symbolize this phase of the Faith. The historic truth is one thing, the spiritual another. It is the spiritual truth, living and continuing, which this sound artistic tradition is intended to set forth.

So in Mr. Brangwyn's panels it is a British working-man who helps to place the body in the tomb. Workmen lift the body from the Cross. And, by contrast, a capped workman joins in the imprecations as the weary Christ, staggering under the load of His Cross, toils onward to Calvary.

And when overcome by His burden Christ falls on the way a British "Tommy," in steel hat and sheepskin coat, threatens to strike Him. But behind Him, in another panel, walk two soldiers whose attitude seems that of compassion. Indeed, they are apparently helping to carry the heavy Cross. So it is all through these panels, the contrast of follower and reviler drawn from the same classes. A workman curses and workmen reverently take the body down for burial. One kisses the head of Christ as he tenderly lowers Him, freed from the cruel nails.

There is much symbolism here, but it does not force itself on the beholder. It is quietly introduced and so naturally that it appears an integral part of the panel. Some of the women wear the clothing of nuns. Some of the men might well be monks. But the similitude is not stressed, and does not annoy. Clearly the artist means to convey here the relation between Christ and His Church.

Those who know the work of Mr. Brangwyn also know his incurable optimism. Always in his paintings in which there is any religious or ethical motive, notably in such decorations as those at Horsham and his war panel at Winnipeg, he introduces somewhere the note of hope, the vigorous belief in youth and life. Here too it may be seen by those who care to look for it. In the station where Christ wipes His brow while a workman threatens Him there is a naked boy clinging to his mother's skirts. And along the way there are tufts of grass. While Christ goes to His death He also goes to give life. So Mr. Brangwyn conveys the truth by the boy who symbolises the new life and the grass of the field which is constantly renewed.

You will find this symbolism again in the scene at the tomb. Right in the foreground, and serving the double purpose of decoration and symbolism, are some growing flowers, springing up amid the thick grass. So in a simple and natural symbol the artist suggests the Resurrection.

TEMPERA PANEL. BY FRANK BRANGWYN, R.A.

The composition of these panels is largely determined by their nature and by tradition, and there is no need to say much about it. The drawing is vigorous, the handling direct, and there is a rough strength which must appeal to the type of mind for which these stations were produced. Mr. Brangwyn can never be other than Mr. Brangwyn. Even in such conventional and strictly limited work as this he has stamped it with the mark of his own personality. He has brought to his task a profound sympathy with the common people. His is not the "pretty-pretty" school of art. He sees men and women as they are, and his fidelity to truth is at times ruthless. But no man has done more to preach the dignity and nobility of all honest labour. And he has done it, not by making his working-men as beautiful as Greek gods and as clean and smart as new-washed statues, but by showing behind the hard-cut features and the dirty, dishevelled clothes the true greatness which these cannot hide. So in these panels he pays another tribute to labour—labour, not in the sense of a political label, but in the sense of all true work, whether of hand or brain, for the common good.

THE PRELIMINARY STUDY

THE FINISHED PANEL

A STATION OF THE CROSS. BY FRANK BRANGWYN, R.A.

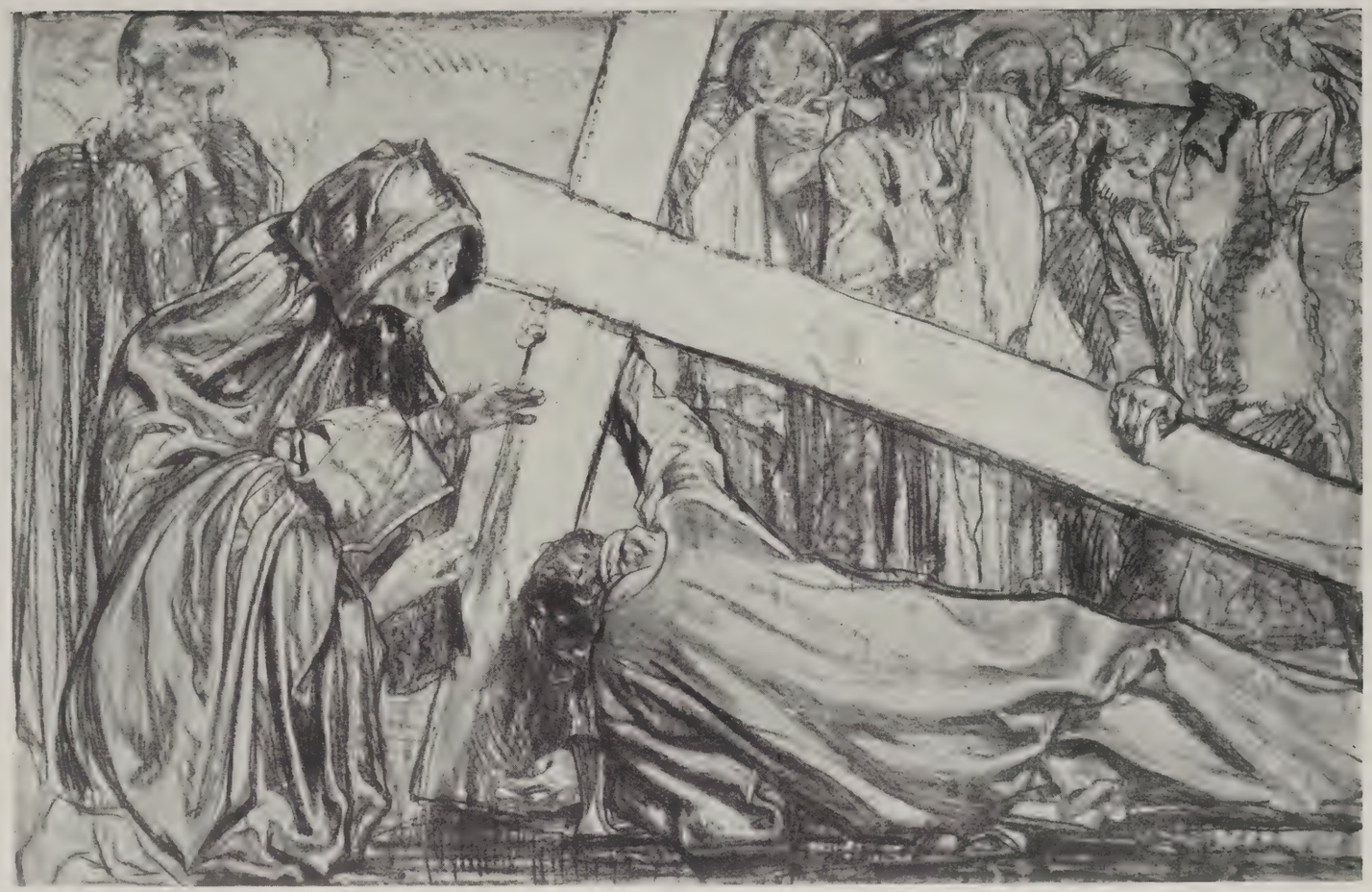
THE PRELIMINARY STUDY

THE FINISHED PANEL

A STATION OF THE CROSS BY FRANK BRANGWYN, R.A.

A Study for a Station of the Cross

From a Drawing by Frank Brangwyn, R.A.



This set of Stations of the Cross has only just been completed by Mr. Brangwyn. The finished panels are now being shipped across to South Africa, and are to be erected in the Roman Catholic Church at a leper settlement near Pretoria. The drawing shows Christ fallen under the weight of the cross. On the right-hand side a soldier in a tin hat and sheep-skin coat endeavours to strike him. This is a piece of symbolism which is strictly traditional.

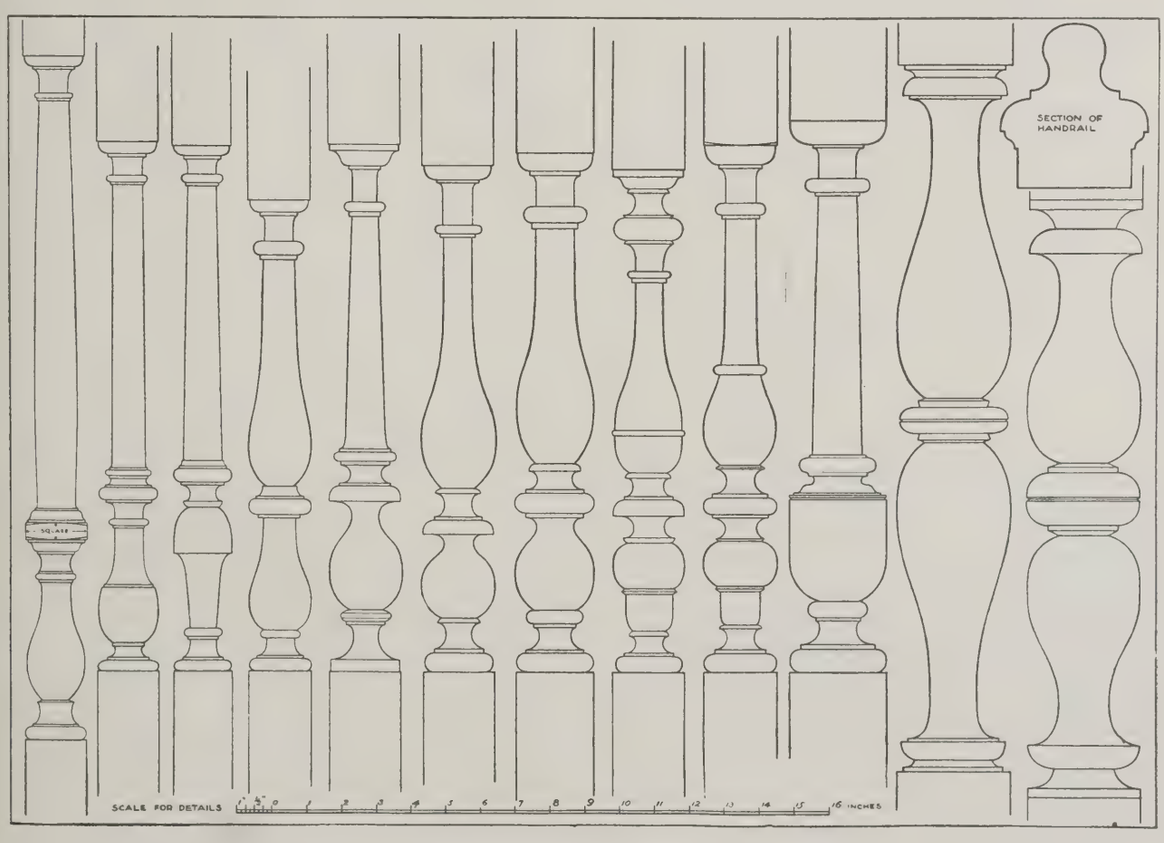
English Renaissance Woodwork, 1660–1730 by Thomas J. Beveridge

THE period covered by Mr. Beveridge's book—1660–1730—saw, perhaps, the finest woodwork which England has produced. The main lines of design are large, sane, and simple; the ornament, however freely applied (and in some cases it is overwhelmingly rich), is judiciously placed with a view to emphasizing the design and not to hide its defects. It was probably Wren who was at the bottom of this manner of treatment. But he would have been powerless without the aid of a school of skilful craftsmen, of whom Grinling Gibbons was the most accomplished. Doubtless the name of this artist has sold many a piece of carving which he never saw, for much of the work attributed to him in the past must now, in view of modern researches, be credited to other hands. Indeed, a little reflection must convince the unprejudiced that neither Gibbons nor Chippendale nor Heppelwhite could possibly have executed with his own hands, or even under his own supervision, a tithe of the work named after either of them in auctioneers' catalogues or the suave phrases of the dealer in antiques. Mr. Beveridge is sound on this point in his references to the "school of Grinling Gibbons."

Evelyn's account of his discovery of this remarkable artist makes quite romantic reading. He was walking near his own home when his notice was attracted to a lone house in a field. On looking through a window he saw a young man busily engaged in carving a crucifix. Being a man of culture and an amateur of the arts, and, moreover, uncommonly alive to anything new or remarkable in connection with them, he made the acquaintance of the young man, examined and admired his work, and elicited from him that he had sought that out-of-the-way place in order to work undisturbed. So entranced was Evelyn that he resolved to introduce the artist to the King and Queen, which accordingly he did at the first opportunity. The incident, if related with a suitable turn of Oriental language, might well take its place in the Arabian Nights' Entertainments. The Vizier discovers by chance, in a most unlikely place, a carver of extraordinary skill and originality, whom he brings to the notice of the Sultan and the reigning favourite of the harem. In this instance, however, Royalty was not much moved by the opportunity presented to it, which may be considered as a piece of luck for the world at large, for Evelyn fell back upon Wren, and Wren provided more openings for the craftsman's talent than could have arisen from a connection with the Court.

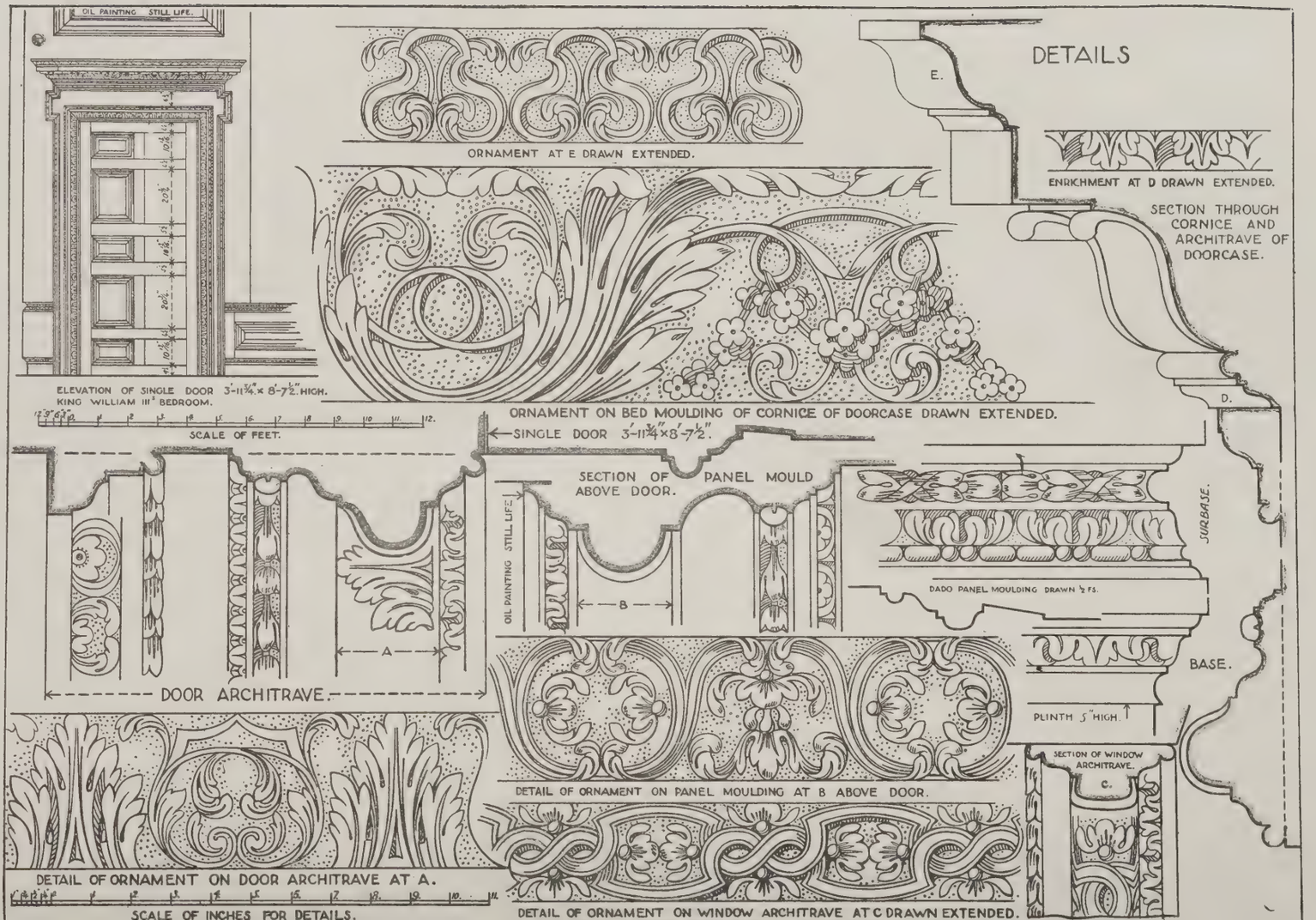
It is largely with the work of Gibbons and his school that the author has concerned himself, for the illustrations consist mostly of carving, and this in consequence of the fact that the work illustrated is highly embellished with it. Among the numerous examples which are given there is, of course, a great similarity, and yet there is no actual repetition; it follows, therefore, that anyone seeking inspiration from this prolific source ought to be able to devise something fresh. At any rate such a person will find plenty of suggestions to stimulate his imagination.

The modern architect who turns to this book for help will of necessity do so on behalf of a wealthy client, for carving is not done for nothing nowadays; and one can but regret the passing of a period when either there must have



A PLATE OF BALUSTERS.

(From "English Renaissance Woodwork." By Thomas J. Beveridge.)



HAMPTON COURT: DOORCASE AND OTHER DETAILS OF KING WILLIAM III STATE BEDCHAMBER.

(From "English Renaissance Woodwork." By Thomas J. Beveridge.)

been plenty of money to spare, or artists must have been content with a far smaller remuneration than satisfies their successors. Mr. Beveridge quotes the prices of some of the work he illustrates, and even allowing for the difference in the value of money then and now, the estimates which one might expect to receive to-day would be considerably higher than those quoted. But it is pleasant to reflect that, granted the increase, craftsmen can still be found who would produce work as good as anything in this book, including though it does the finest work from St. Paul's and Hampton Court.

The draughtsmanship of the illustrations is noteworthy. Amid the complexity of lines which set forth the intricacies of the carving, each one appears to fulfil its mission without hesitation, as will be seen from the specimens here reproduced. John Webb, having occasion to eulogize the draughtsmanship of Inigo Jones, speaks of the "boldness, softness, sweetness, and sureness of his touches." Of Mr. Beveridge's touches the boldness and sureness are obvious, even if the softness and sweetness are a little to seek, being apparent in but a few of the plates. Still, he has achieved his purpose of displaying the pattern and the *motifs* of his subjects for the benefit of those who wish to design in this style.

No student can better employ his "Wanderjahre," if he be lucky enough to enjoy such a time in his youth, than by devoting himself, after the manner of Mr. Beveridge, to measuring and drawing the work of some special period. The mere occupation is a delight, the personal benefit is obvious, and the advantage to other students of all ages is incalculable, whether such students are interested in the history of architecture, or, as the preface of the book says, being unable themselves to make studies at first hand, are yet called upon to design in some particular style. To all such enquirers this work, as well produced as it is compiled, is to be heartily recommended. J. A. GOTCH.

"English Renaissance Woodwork, 1660-1730." By Thomas J. Beveridge. Six Guineas net. Technical Journals, Ltd., 27-29 Tothill St., Westminster.

Arches of Double Curvature—Construction and Stone-Cutting

By J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

An arch built on a circular plan, no matter what form the elevation curve may be, is termed an arch of double curvature, or, in the language of the mason, a circle-on-circle arch. Arches of this type are frequently used in modern work, and some particularly good specimens are to be found in French buildings, e.g. the arch under the cascade at the Trocadero; the arches at the ends of Pont Alexandre III; the arches of the apsidal chapels in the church of the Sacred Heart, Paris.

The subject selected for study in this article is an arch over a miniature grotto and fountain basin, the dimensions of the opening, etc., being made purposely small in proportion to the dimensions of the stones used, so that the details of projection may be more clearly followed. The procedure described for this miniature example could also be employed on a larger example similar to that at the Trocadero.

There are two correct methods employed for arranging the joints in such work, each of which affects the form of the arch soffit in different ways. Both methods will be described in this article.

In the first method—illustrated in Fig. 1—the radiating beds are plane surfaces lying in inclined planes which also contain the axis of the horizontal cylinder, part of which forms the soffit of the arch. This axis intersects at right angles the vertical axis of the cylinder which forms the wall surface.

This method of construction is particularly suitable when the wall is set out in plan with a comparatively large radius, giving a flat curvature to the surface.

An arch built with beds arranged in this manner will be perfectly stable provided the stones extend sufficiently far into the wall. The vertical joints of the square-bonded stones are made normal to the cylindrical surface of the wall.

In the second method (to be dealt with next week), the radiating beds are not plain but helicoidal surfaces, the surface of the soffit being conoidal.

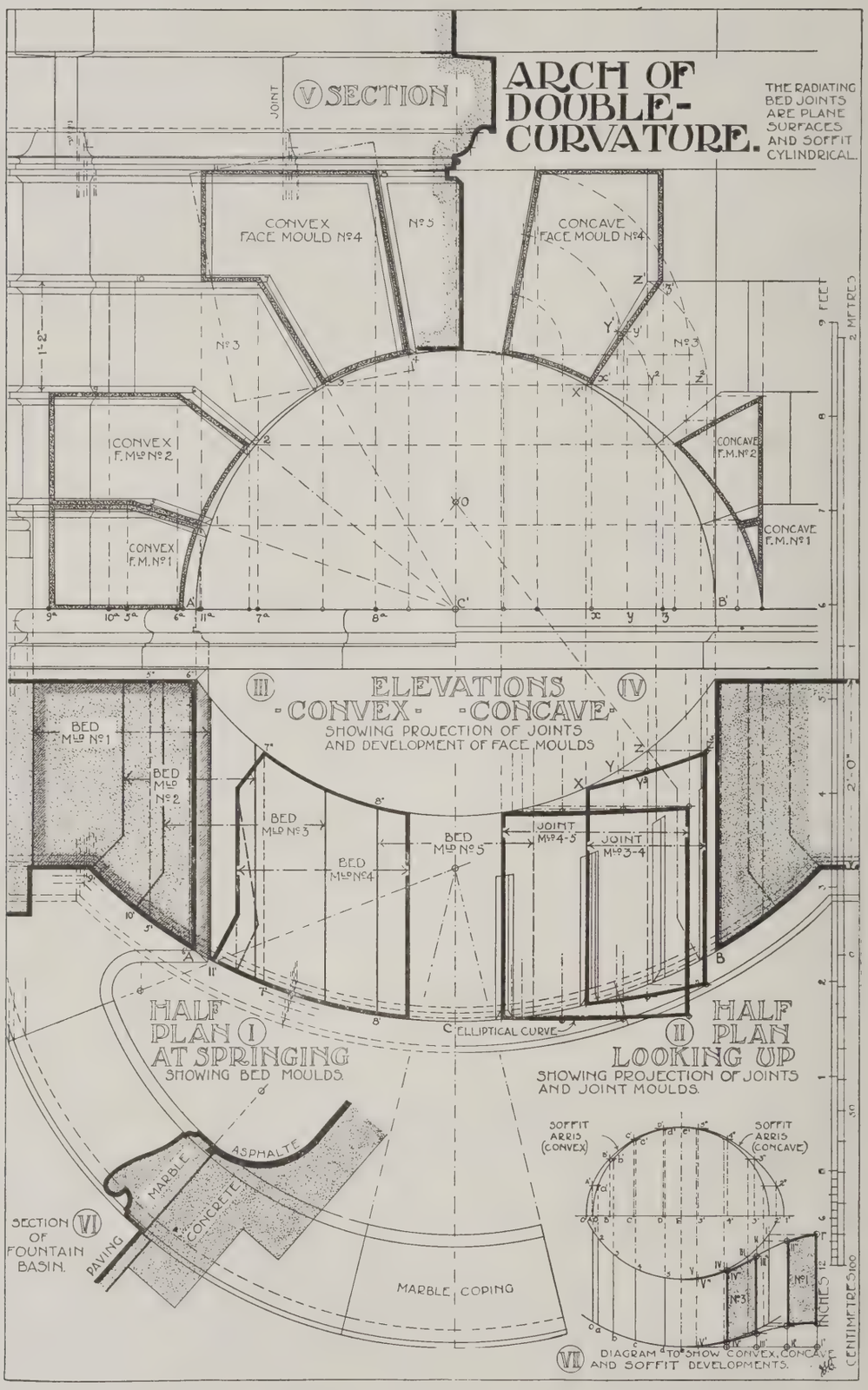
This method is adopted where it is necessary to have the "ingo" or "reveal" of the opening perpendicular to the cylindrical surface of the wall, as in the window arches of the church of the Sacred Heart already referred to. It is particularly suited to cylindrical walls whose plan radius is comparatively small, giving a pronounced curve to the surface of the wall.

This method, however, gives a weak and unsafe structure unless the wall is thick and the stones of the arch extend full-way through, the forces acting in such a manner as to tend to make the head of the arch bulge outwards on the convex face.

Although the ashlar arches in the examples illustrated have no mouldings, there would be no difficulty in applying mouldings in either case if necessary. In the first example the moulding would be cut obliquely by the plane beds, and the cross section of the moulding would vary in outline at each bed joint. In the second example with the helicoidal beds, the cross section of the moulding would be the same for each bed joint, and although the beds are slightly twisted surfaces a flexible zinc mould can quite readily be applied.

Arch of Double Curvature with Plane Bed Joints and Cylindrical Soffit—Fig. 1.

Begin by drawing the centre and springing lines, and from point C′ describe the semicircular soffit in elevation, the width of the opening being 5 ft. 6 in. Next draw the convex and concave curves in plan, the radius of the former being 5 ft. 6 in., and of the latter 3 ft. 4 in. Set out also the thickness of the wall—2 ft.—forming the abutment. Draw the jambs of the opening in plan by projecting from the extremities of the semicircle at A′ and B′ in elevation. Now divide the semicircle into nine parts making stone No. 1 smaller than the other stones by the amount of the chamfer—$\frac{3}{4}$ in. This slight adjustment is necessary if it is desired that the actual width of the soffit surface between the chamfers on all the stones be alike. Next draw the level beds, the courses being each 14 in. in depth, except No. 1, which is $\frac{3}{4}$ in. narrower than the others. Now complete the plan and half elevations, arranging the position of the vertical joints. The vertical joint of stone No. 1 coincides with the edge of the projection on the abutment. The vertical joint of stone No. 2 is at the intersection of the plane of the wall and the cylindrical surface (see points 9 and 9′), and, like the other vertical joints of the square bonding on the convex face, it is formed normal to the cylindrical surface for a distance of about 6 in. The position of the vertical joint of stone No. 4 on the convex



I.—AN ARCH OF DOUBLE CURVATURE: ELEVATIONS, HALF-PLANS, ETC.
DRAWN BY J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

evation is determined by first marking on the plan the osition of the vertical joint of this stone at point 7″ on ie concave side. This joint is drawn normal to the concave irface for a distance of about 6 in., then it is drawn irallel to the axis of the horizontal cylinder until it can e carried through normal to the convex surface at the oint 11′. An alternative method, effecting a slight conomy of material, is shown in plan by a broken line. he vertical joint of stone No. 3 can be fixed wherever quired provided it is first suitably placed on the concave evation. After completing the plan, clearly indicate one ed mould for each stone.

It is proposed to describe how the stones of this arch ay be worked by three methods: (1) by the use of bed oulds, concave and convex face moulds; (2) by the use bed, soffit, joint, and elevation face moulds; and (3) by e use of bed, soffit, and joint moulds, and bevels.

irst Method: Production of Convex and Concave Face Moulds.

Before explaining the development of the convex and ncave face moulds, it may be observed that the radiating ints in elevation are straight lines, but in the develop- ents they will be slightly curved. On the convex side is curvature is so slight that it is not shown on the awing, but on the concave development the curve is awn.

To show the method of development of the soffit arris . the convex and concave faces a small scale diagram, II, has been drawn.

To produce the development of the soffit arris on the nvex face make an accurate "stretch-out" of the plan rve by setting out on the springing line all the divisions dicated by the points O′, A, B, C, D, E, which are mea- red from the corresponding divisions indicated by the ints *o*, *a*, *b*, *c*, *d*, *e*, on the plan (see VII). From the ints on the springing line draw ordinates to the heights the corresponding points *a′ b′ c′ d′* in elevation, and a rve drawn through the points O′ A′ B′ C′ D′ will give e convex development of the soffit arris. Reverting to e larger scale drawing, III, the vertical joints and upper ds of the radiating joints are drawn in the development spacing out on the springing line the divisions indicated the points 5^a, 6^a, 7^a, 8^a, 9^a, 10^a, 11^a, which are trans- red from the corresponding divisions indicated by 5′ to ′ in the plan. Project ordinates from these points to the ights of the corresponding points in the elevation.

The convex face-moulds for stones Nos. 1, 2, and 4 are dicated by shaded outline.

The concave development is dealt with in a similar nner, the curvature of the joints being determined by st projecting an intermediate point as Y′ to the concave rve in plan at Y. Measure the spaces between X Y Z in n, and set them out on the springing line at *x y z*. From se points project up to the heights of X′ Y′ Z′ in the vation and so determine the points *x′ y′ z′* through which e curved joint on the concave development is drawn.

Stone No. 4 by First Method—Figs. 2 to 5.

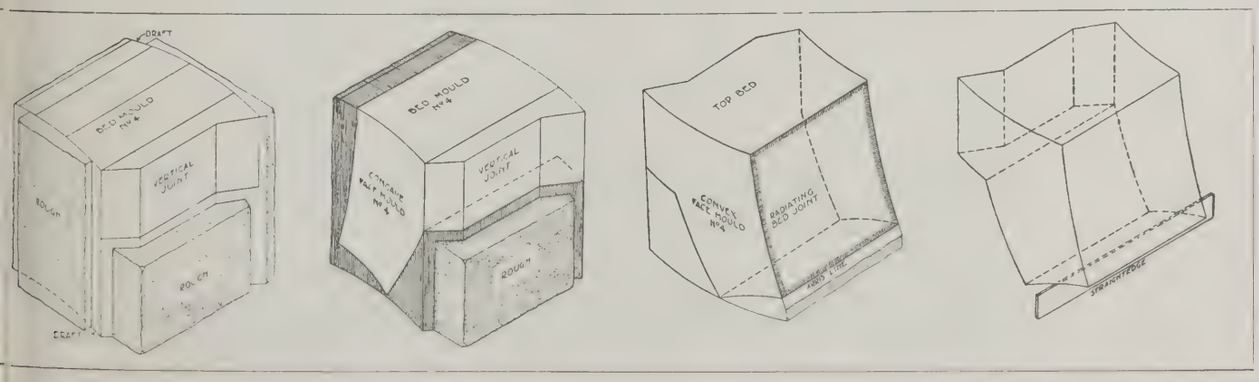
The dimensions of the rough block of stone required by this method will be approximately 2 ft. 6 in. by 2 ft. 1 in. by 2 ft. 5 in. Begin by working the top bed and scribe the bed mould. At right angles to this bed work the vertical joint and accurately cut two or more chisel drafts, as shown in Fig. 2. Now bring the stone to within about $\frac{1}{4}$ in. of the height of the face mould by working an operation plane parallel to the top bed. On this surface—which need only be roughly scabbled—the bed mould is scribed, its position relative to the lines scribed on the top bed being adjusted by the vertical drafts already cut. The convex and concave cylindrical surfaces are now worked by forming a series of straight parallel drafts. On these surfaces carefully apply and scribe the flexible face moulds taken from the developments (see Fig. 3). Next work the upper radiating bed joint as a plane surface, scribing the arris line at the lower edge of the joint as shown in Fig. 4. The stone is now turned over to rest on the surface just completed, and the lower radiating bed joint and small level bed worked. Complete the cutting by cleaning out the cylindrical soffit as shown in the view of the finished stone, Fig. 5.

Second Method—Production of Bed-joint and Soffit Moulds.

The bed-joint moulds required for stone No. 4 are shown, and the procedure explained can be adopted for the production of the other radiating bed-joint moulds. On either the convex or concave elevation set out one or more intermediate points, as Y′ on the radiating joint 3–4 (see IV), and project down to the point Y in plan. Make a rabatment of the surface of the bed into a horizontal plane by using the lower edge of the joint at X′ in elevation as a hinge. As the points Y′ and Z′ are swung down towards the right in elevation, the corresponding points in plan will move also to the right fixing the points Y^3 and Z^3, projectors being dropped from Y^2 and Z^2 in the elevation. The convex curve at the opposite end of the mould is determined in a similar manner. It will be noted that as the cylinders are cut by inclined planes, the curves forming the edges of these moulds will be parts of ellipses.

The soffit moulds are obtained from a development of the soffit, which is shown to a small scale in diagram VII. These moulds are produced by projecting the soffit joints into plan in the points I to V on both concave and convex curves. Now make a development or stretch-out of the quarter circle representing half the soffit curve in elevation as shown by the line containing the points I′ to V′. The lines drawn from these points are generators of the surface of the cylinder forming the soffit, and the points I″ to V″, through which the curved edge of the soffit development is drawn, are obtained by projection from the points I to V on the plan curve. The soffit moulds for stones Nos. 1 and 3 are indicated by shading.

The only other moulds required for use by this method of cutting are face moulds taken from the convex elevation, the position of the vertical joints on the concave side being marked on these moulds.



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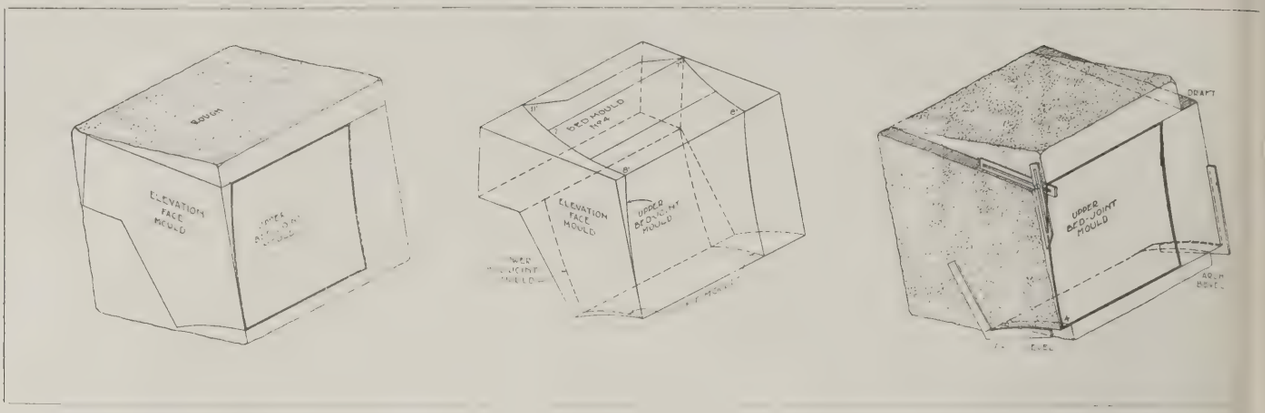
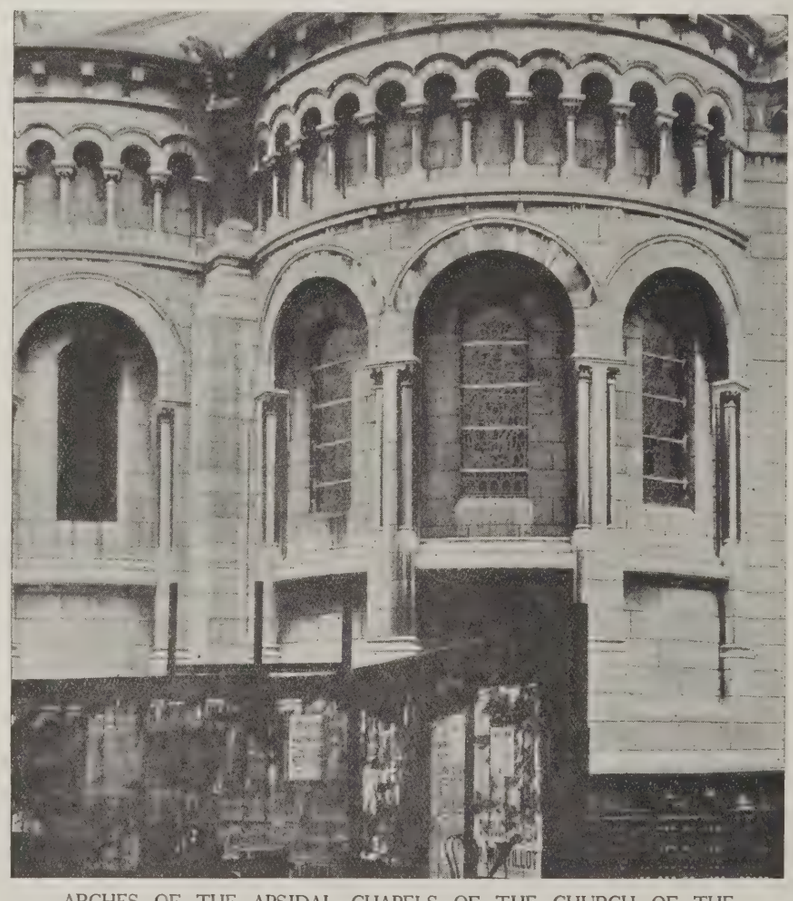


6. 7 8.

Stone No. 4 by Second Method—Figs. 6 and 7.

The dimensions of the rough block of stone required by this method will be approximately 2 ft. 3½ in. by 1 ft. 11 in. by 2 ft. 10½ in. The outline of the rough block is indicated in elevation by dotted lines. Begin by working the largest plane surface, which in stone No. 4 is the upper radiating bed joint. At right angles to this roughly form a surface at back and front on which the elevation face mould can be applied (see Fig. 6). To the lines of the face mould work the two level beds, the lower radiating bed joint and the soffit, as shown in Fig. 7. Now apply the bed mould on the top level bed keeping the extreme corner (7″) of the mould at the concave side almost touching the back of the stone—Fig. 7. The upper radiating joint mould is now scribed, adjusting its upper edge to coincide with the extremities (8′ and 8″) of the concave and convex lines already scribed on the level bed. The soffit mould—taken from the development of the soffit—is then applied, adjusting its upper edge to coincide with the extremities of the soffit arris line of the upper radiating bed. In like manner the lower radiating bed-joint mould is applied, adjusting it to the extremities of the soffit arris of this bed, and to the line forming the intersection of this radiating bed and the small level bed. The vertical joint can now be worked at right angles to the top level bed, and the superfluous stone removed from the convex and concave faces. The convex and concave surfaces are now cleaned by cutting a series of straight drafts in a direction parallel to the vertical axis of the cylinder.



ARCHES OF THE APSIDAL CHAPELS OF THE CHURCH OF THE SACRED HEART, PARIS.

Stone No. 4 by Third Method—Fig. 8.

The dimensions of the rough block of stone required b this method will be similar to that required by the secon method. Begin by working the surface of the upp radiating bed, and scribe thereon the bed-joint mould keeping it well to the front of the stone as at 4, Fig. 8. Wit a bevel set to the angle which the upper level bed make with the radiating bed cut drafts at front and back of th stone as shown. Now work the level bed as a plane surfac and on it scribe the bed mould. The vertical joint may the be cut, on which gauge the depth of the lower level bed.

To form the soffit, first sink a draft at the front and bac of the stone to an arch bevel taken from the elevatio Then between those drafts cut a series of parallel straigh drafts. On the cylindrical surface thus formed inscrib the soffit mould and cut in a chisel draft to form the soff arris of the lowe radiating bed. B applying the arc bevel to the soffi as shown, the su face of the lowe radiating bed ma be worked, ca being taken to for a neat intersectio between this be and the small lev bed, which is cu at right angles t the vertical join On the lower rad ating bed appl the correspondin bed-joint mould carefully adjustin it to coincide wit the marks alread scribed on the soffi

The convex an concave surfaces ca now be worked b cutting straigh drafts parallel t the vertical axis c the cylinder form ing the face of th wall.

Of the three me thods describe probably the firs gives the mos satisfactory result

(To be concluded.)

Architectural Details. 26.—Double-Curvature Arch in Abutment of the Pont Alexandre III, Paris

Cassien and Bernard-Cousin, Architects

The Pont Alexandre III was built during the years 1896–1900, to commemorate the Franco-Russian alliance. It is a remarkably fine example of masonry and steelwork in combination. The bridge itself is a flat steel arch resting on masonry abutments. A detail of one of these, containing a magnificent rusticated double-curvature arch, is shown in the above photograph.

Mr. William Harvey on Structure and Colour

MR. WILLIAM HARVEY, Owen Jones Student, 1913, speaking at the R.I.B.A. the other night on Structure and Colour," did not deal ith attempts in colouring of modern uildings, nor did he lay down any rules r our guidance in the future, but the scussion which followed his paper rned solely upon this topic. In London d, indeed, in all the big manufacturing wns of the north, it would appear that e first thing to do is to see what simple ean architecture looks like in clean ties before we begin to colour it. This e can do by pressing for some abatement the smoke nuisance. If good un-loured architecture is unsatisfactory en we may resort to colour, but is not lking of colour in buildings at the oment like asking for an orchestra ecause we have let the grand piano get t of tune ?

Mr. Harvey, in the course of his paper, id: Investigation of the two aspects of lour and structure in architecture ould form an interesting and ample ld for a lifetime's study, and its enor-ous extent makes it peculiarly difficult condense into an hour's lecture. More an that, the ground has already been lled and the harvest reaped by no less a aster than John Ruskin, whose book, The Stones of Venice," is an elaborate eatise on the subject. The book is a assic; and if it shares with other classic orks the fate of being "praised and not ad," that perhaps is due to the fact that uskin filled his pages so full of good ings that it is difficult to avoid a sort of ental indigestion in attempting to ab-rb them.

The practice of design is much more a atter of the imitation of selected ex-mples than an affair of the application f rational or religious principles; and owever right Ruskin was in his spiritual nalysis of certain elements of building, e good effect is dissipated by the prac-cal difficulties in the course of interpre-on from perfect theory to actual bricks nd mortar. A recent writer, complain-g of the impracticable nature of Rus-in's advice, remarked with frankness: that when his dreary lamp of Truth was rned upon a modern building its light ecame unaccountably extinguished." lodern buildings are designed in re-ponse to definitely practical ends and ims.

Structural honesty, combined with ppropriate colour, should be kept in iew in all architectural design, but it ould be absurd to suppose that build-gs are made merely to express true rinciples of structure and colour. It is nly when the general purpose, the con-enience and economy of the building ave been considered that these aspects f architecture begin to loom large in the eld of vision. However the architect ces his problem, colour and structure ill take their place in the finished build-g. He may be interested in structural roblems and allow them to express emselves in his finished work—may, deed, enlarge upon them and make em an integral part of its appeal as a ork of art, or he may do all in his ower to disguise the real structure with applied ornament unrelated to affairs of building.

Whatever he does or does not do in this respect, the building will be open to legitimate criticism by those who, like Ruskin, feel that straightforward construction is one of the great essentials of architectural design. Sham construction has a horrible knack of showing itself in unexpected places, and makes demands on the intelligent foresight of the designer out of all proportion with the saving of money involved in its substitution for more solid work. Minor harmonies which follow, as a matter of course, the employment of sound traditional craftsmanship have to be produced by hard and anxious thinking; so that, in many cases, it is much more difficult to compose a sham that will prove acceptable in appearance than to produce a solid work. In a similar way, it is within the province of the architect to determine the colour of his buildings, to decide whether colour shall be considered at all, whether the cheapest or most convenient materials shall be used irrespective of their colour, or whether special attention shall be given to the selection of materials of intrinsically pleasing hues or of hues that have been found to take their place in the scheme without clashing under certain climatic conditions.

Over and above the possibilities inherent in the selection of sound building material of pleasant colour is the possibility of decoration by colour in the form of applied pigment, or by incrustation with marble, tiles, mosaic, or metal. All methods yield excellent results under suitable conditions, and this paper has been written, not to advocate any particular application of colour, but to put together some facts in relation to the combination of structure and colour in architecture under different climatic circumstances. In some way or another colour is bound up in the appearance of all architectural works, and when not formally invited it is rude enough to intrude its presence unasked. The colour of materials available at certain sites controls the finished effect of many works of architecture.

It is the misfortune of England at the present time that some of the most generally useful and economical bricks happen to possess a hard, unpleasant tint of pink, whilst bricks of a really beautiful colour can only be obtained at much greater cost. Fashion has something to do with our taste in bricks, and the only thing to steady our judgment is to ask ourselves whether the colour value of such and such a building material really goes well with the other things in the picture—the sky and clouds and foliage, if there is any in the neighbourhood.

Old London stock bricks, with their varied tints, including some black and red among the yellow, stand well under the grey skies and soot of London, and it is a pity that they were ever improved into dull uniformity. If anything, a little more variety would have improved them; and in the hands of architects who had an eye for colour they were given dressings of richer tint or banded with diagonals of vitrified headers.

There is one sure way of bringing out all the bad colour qualities of the cheap pink brick referred to, and that is to construct a long blank side wall of it with a front wall of better colour and texture designed with some pretence to architecture. When this is carried into execution, the detail on the front counts for nothing; it is bludgeoned out of existence by the shrieking conflict of colour on the side wall.

The natural colour of material is a matter of particular importance in an inclement and humid climate where colour added by the application of pigments is subjected to the severest possible tests. Where acid fumes, smoke, and soot are present, the whole colour question must be governed by these extraneous considerations. The only buildings in London that appear really comfortable are those which happen to wear their mantle of soot with dignity, and in estimating the colour value of a new architectural work in the Metropolis of the world it is necessary to ask oneself whether it will prove to be a good subject for the soot and acid treatment.

Cleaning the exterior of a building is only practicable in certain cases, and even with the application of the steam brush there is the risk of turning a dirty building into a shabby one. Given time, the rain and wind acting upon the soot may produce pleasant effects upon a good many building materials; and Sir Christopher Wren was singularly fortunate in choosing materials which would still be beautiful when seen in the murk of a far bigger and far dingier London than that in which he lived and worked. Until greyness can be banished from our skies, it is futile to hope for a successful chromatic scheme of really brilliant or primary hues in our buildings. It is a law of colour composition that balance of hues or tones must be observed throughout the design as a whole, and where the background of sky is impregnated with soot the objects in the foreground must partake of the same character or be out of key.

In artistic language, colour out of key is sometimes described as being "muddy" or "dirty," so that in London pure primary colours might have to be referred to as dirty, dirt being matter out of its place; and primary colours, however much we may love them, are out of their place in a dingy city.

That this is not only a matter of idle theory is evidenced by the depressing effect of the patches of bright colours introduced by the posters on our hoardings. The artistry displayed in individual posters is often of a notable order, but they cannot be considered as appropriate colour notes in the street architecture, since they do not harmonize either with the sky or with the colours of adjoining buildings. With competent supervision of the main effects of colour and arrangement, hoardings might become things of real beauty and instruction, not only in respect to the values of advertised commodities, but as concerns colour decoration.

England is a country of atmospheric effects, involving on many days in the

year subdued colours for all objects in the background and middle distance. A day in the middle of spring may have a sky veritably the colour of lead. The green of distant grass and trees is overlaid with a similar gloom, and objects in the background, irrespective of their local colour, are toned down to a sort of depressing uniformity. It is the difficult business of the British architect to discover a colour-scheme that will take its place against this background and still retain its interest.

Discussion.

Mr. Gerald Moira, in thanking Mr. Harvey for his paper, said that recently he had the honour of judging in the R.I.B.A. Colour Competition, and he was disappointed that our younger men had very vague ideas how to tackle the subject. Little was known of the construction of colour. He believed that London wanted colour, and preferably in great blocks.

Mr. Halsey Ricardo, F.R.I.B.A., in seconding the vote of thanks, said that in places like those spoken of by Mr. Harvey—Constantinople, Cyprus, and Jerusalem, places which were dusty and lacking in the warm colours of nature—the people had said we must have some colour to alleviate the barrenness. London was like those places, devoid of colour; which was a great misfortune. If we cared about our buildings, then, we should take care of them, and not allow them to decay under a pall of soot. Often it was the practice to whitewash churches. Whitewash was a grand preservative, and besides being attractive to the eye, it brought out the detail of a building in its true light and shade. We might with colour enliven the architecture that we had at present. The stucco of London was calling for it, and it was most unfortunate that the grand colour of our late eighteenth-century squares and crescents should have been lost by each individual painting his own vertical strip regardless of his neighbours, and regardless indeed of the other half of the column belonging next door.

Mr. William Woodward, F.S.I., F.R.I.B.A., said that nature or soot had provided for St. Paul's the very colour we wanted for London. For was not the lower part dark and the upper part light, as it should be in all colour composition, like the dado of a room? He would divide colour under three headings: 1. Colour produced by materials; 2. Colour produced by pigments; and 3. Colour produced by soot.

Mr. Edward Warren, F.R.I.B.A., F.S.A., said that soot was the worst enemy of a building. It played havoc with its natural shadows and hid its contours. We knew that the sculptures on the west front of Wells were coloured, and there was no reason why we should not whitewash or colour-wash our own buildings. Mr. Halsey Ricardo had shown with considerable success how a building might be coloured with coloured tiles and ceramics, the colour of which the wind and rain were ever renewing.

Major H. C. Corlette, O.B.E., F.R.I.B.A., remarked that it was impossible to build without getting some structural colour, but let us study the application of colour in the past so that we might know what to do to-day.

Mr. Anning Bell said that an occasional bath was good for a building. In a building we could not wash off everything; certain of the grime would remain in the interstices and would serve to emphasize the forms. When we colour a building we must colour a street. It would never do to have one building highly coloured and those around it colourless, nor would it do to have a street a collection of discordant colour schemes. We might have an authority who could control external colour schemes.

Mr. Percy J. Waldram told the meetin of an interesting scientific discovery i the production of the conditions of da light. Daylight, it appeared, was not light which could be produced by an one kind of artificial light; it was, as i were, an orchestra of different kinds c light. In Bradford, for instance, clot goods which were intended for the Eas could be examined under the same con ditions of strong daylight which the would meet when they were sent out Many scientific theories had been pu forward as to the construction of colou schemes, but no scientific analysis wa as productive as carefully educated goo taste.

Mr. Arthur Keen, F.R.I.B.A., who tool the chair as Mr. Waterhouse had to leav early, said that Mr. Harvey had not le us into the secret of how London shoul be treated in colour. Perhaps he was a wise man. It was the characteristic o London architecture that every man wa a law unto himself. We did not want thi to happen when we came to colour. I London there was an enormous amoun of colour apart from architecture; there were the trees, the people, the advertise ment hoardings, and our red buses. His feeling was that having to wash a building down was a confession of weakness.

Mr. Harvey, in reply, said that colou in London was a very difficult problem We had not yet decided on our materials and it was not until we knew what were our best building materials that we could get some uniform ideas of colour. For instance, contrast St. Paul's and the Houses of Parliament. St. Paul's had weathered under the storm of soot, while the Houses of Parliament after many less years were showing signs of decay, but no signs of weathering.

The tendency was towards more economical construction, and those ultimate materials of building would establish our ideas on colour. F. E. T.

The A.A. Visit to Great Fosters, Egham

BY the special courtesy of the Hon. Gerald Montagu, the Architectural Association paid their second summer visit to Great Fosters. The estate of Great Fosters is situated in the parish of Thorpe, about a mile south of Egham. Extensive alterations and additions have been carried out recently to the house and gardens from the designs of Messrs. Romaine, Walker, and Jenkins, architects.

The house is Elizabethan, and has a moat on three sides. Although its earlier history cannot be traced, the probable date of erection is 1609, these figures occurring in the decoration of the plaster ceiling in the drawing-room. The later history of the house begins in 1862, when a restoration took place. Many of the existing chalk window-dressings and other stonework were renewed in Bath stone, and the 2 in. brick chimney-stacks were rebuilt in 3 in. bricks with machine-made mouldings. When the present owner, the Hon. Gerald Montagu, took possession, three years ago, the original character of the house had been lost by unskilful restoration, and the state of dilapidation was extreme. Through standing empty for some years the house and gardens showed many signs of neglect. These factors did not help to make the architects' task any easier, and the result, which shows so much sympathy with and knowledge of Tudor work, is all the more remarkable, and is a fine example of what restoration should be.

Externally the whole of the roofs have been relaid, all the parapets and the chimney-stacks, with one exception, have been rebuilt, the stone dressings have been renewed in Beer stone, the modern iron rain-pipes and heads have been replaced by lead, and the 3 in. brickwork has been replaced by small bricks to match the old work. A new tower, with a secondary staircase and a kitchen wing, with offices and servants' bedrooms, etc., have been added; the old kitchen has been converted into the new dining-room; and the old servants' bedrooms are now new guest-rooms.

Internally the decoration to the principal rooms is mostly new, but like the exterior, it is difficult to tell where the old work finishes and the new begins. An interesting Italian interior has been provided to the principal bedroom, and the dining-room has a French Renaissance interior, the decoration in this case being based on an overmantel transferred from the owner's town house. Otherwise the rooms all follow the period of the house. In the nurseries there is an ingenious fire-escape staircase concealed in a hanging cupboard. It is an amusing solution of a difficult problem.

There is a considerable amount of restoration and new work in the various buildings surrounding the house. Of these the garage, laundry, agent's house, and chicken-farm house were seen by the party. The latter, which is of considerable extent, has an external circular stair and a gallery for access to the upstairs rooms.

The gardens, with the exception of the moat and a portion of walling, are all new, and already they bear a matured look. While they are designed on traditional lines the inclusion of a Japanese bridge as a connecting link to the estate seemed a daring but entirely successful experiment.

The members were conducted over the house by Mr. Jenkins, the architect, and afterwards they were entertained to tea by the Hon. Gerald Montagu and Mrs. Montagu. The builders who carried out the new work were Messrs. S. I. Williams and Sons, of Oxted, the decorations being done partly by them and by Messrs. Litchfield & Co., 3 Bruton Street, W., and Messrs. White, Allom & Co., 15 George Street, W. R. W. S.

The Stability of Walls.—IV

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

WALLS have frequently to carry concentrated loads at various points, such as from the ends of floor girders, roof principals, etc. These loads should never rest direct upon the brickwork, but should have a stone template interposed. If the load is brought on by a wooden beam, as a flitch girder or the tie-beam of a roof truss, the safe pressure upon the wood will fix the area of the bearing surface. This should never exceed 200 lb. per sq. in., and the bearing surface might well be doubled. The stone template should have sufficient area to limit the pressure on the brickwork below it to a maximum of three tons per sq. ft., and should have a thickness of at least one-third of its greatest projection beyond the timber. For example, say the end of a tie-beam 6 in. wide brings a load of 7,200 lb. on to the wall. The bearing surface of the wood must be at least $\frac{7200}{200} = 36$ sq. in., and as the piece is 6 in. wide its bearing must be at least 6 in. long. The stone template would require an area of $\frac{7200}{3 \times 2240} = 1{\cdot}072$ sq. ft., $1{\cdot}072 \times 144 = 154{\cdot}3$ sq. in. Let the width be 9 in., then the required length will be $\frac{154{\cdot}3}{9} = 17{\cdot}1$, say 18 in. The greatest projection will be 6 in., and therefore the thickness 2 in. The plan will be as shown in Fig. 15.

The ends of iron girders or rolled steel joists are generally carried on piers, but there are cases where an ordinary brick wall may give sufficient support. Suppose the pressure from the end of a girder to be five tons, the bearing area on the stone template at fifteen tons per sq. ft. will be $\frac{5}{15} = \frac{1}{3}$ sq. ft. or 48 sq. in., and if the width of flange be 6 in. the length of bearing will be $\frac{48}{6} = 8$ in., which can be obtained on a 9 in. wall. The stone template would have a width of 9 in., a length of $\frac{5 \times 144}{3 \times 9} = 27$ in., and a thickness of $\frac{27 - 6}{2} \times \frac{1}{3} = 3{\cdot}5$ in. The plan of this is shown in Fig. 16.

If the load had been ten tons the length of bearing would have been 16 in., requiring a 9 in. by 27 in. pier bonded into the wall, but when a girder end is carried by a brick pier bonded into the wall it is desirable that the pier should project equally on each side of the wall, giving in this case a projection of $4\frac{1}{2}$ in. both inside and outside, and this would help to break the monotony of a flat wall on the elevation. The full footings and concrete should be carried round the faces of the pier. It would not do at all for the pier to be built up on the wall footings.

When the end of a girder is carried by a detached pier it is important that the girder should be central on the pier. Take the case of a load of seven tons given by the end of a girder on a pier 27 in. by 18 in., the centre line of the girder being 9 in. from one edge of pier as in Fig. 17. The distribution of load will be in accordance with Fig. 6 in Article I, thus

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{7}{2{\cdot}25 \times 1{\cdot}5} \pm \frac{7 \times {\cdot}375}{\frac{1}{6} \times 1{\cdot}5 \times 2{\cdot}25^2}$$

$2{\cdot}074 \pm 2{\cdot}074 = 4{\cdot}148$ tons sq. ft. compression and 0 tension, whereas if the pier had been only 18 in. by 18 in., and the girder central as in Fig. 18, the pressure would have been simply $\frac{W}{A} = \frac{7}{1{\cdot}5 \times 1{\cdot}5} = 3{\cdot}1$ tons per sq. ft. uniformly over the brickwork, so that a pier two-thirds the size, if properly used, will carry the full load with three-fourths of the effort.

Generally speaking, a pier with a height of not more than six times its least horizontal measurement may be loaded up to three tons per square foot with a central load, but if built higher than this the safe load will be reduced to $\frac{24 - r}{6}$ tons per square foot, r being ratio of height to least width, or $\frac{h}{w}$. If at this rate the pier is not large enough to carry the required load, and the thickness cannot well be increased in one direction, it must be increased in the other direction, making it symmetrical on each side of the load.

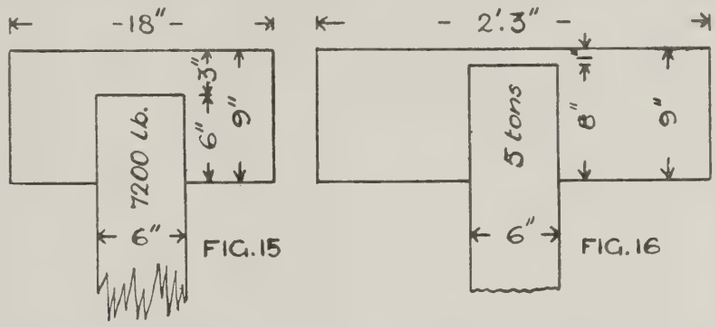


FIG. 15

FIG. 16

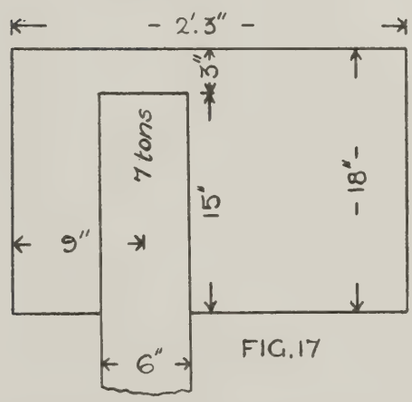


FIG. 17

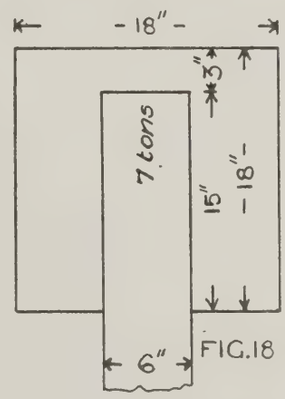


FIG. 18

(To be continued.)

Correspondence

Unification & Registration

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Mr. C. McArthur Butler is a prominent member of the Unification Committee, and any expression of opinion from him on this subject, such as you reproduce in your issue for May 24, is useful in view of the real difficulty there is of our ever understanding what is in the minds of the Committee.

Mr. Butler states that architects have a real grievance because "any rogue may assume the title of architect and hold himself out to the public as such" without even taking out the £10 licence that is required of auctioneers, and he follows this up with the surprising assertion that "Great Britain is probably the only civilized country where the public is not protected from this danger and where the qualifications for and the practice of architecture are not defined and regulated by laws." It would be very interesting indeed to have some supporting evidence of this very comprehensive claim, which is not borne out in any way by the fact that in France "possession of a Government diploma confers a recognized status upon the architect." So, presumably, does the possession of the R.I.B.A. diploma, for example; but perhaps Mr. Butler will tell us which are the "civilized" countries of Europe that have the qualifications for and the practice of architecture defined and regulated by laws in the way in which we understand he claims them to be.

That in Great Britain the subject of the Statutory Registration of architects has been a burning professional question for nearly forty years may, unfortunately, be true, and it is even conceivable we may expend our energies for another forty years on the same burning question with an equal lack of result. Mr. Butler may claim that "architects in general, and those practising in the provinces in particular, know the urgent need which exists in the interests of the public for legislation which will 'close' the profession," but I am afraid the public are blissfully innocent of any such necessity, in the same way as, whatever may be said, the more clamorous of the Unificationists are probably innocent of any desire to limit the "closing" of the profession to bona-fide and competent architects in any proper sense. The adopted resolution of the Unification Committee plainly shows this, unless it is to be regarded as a misuse of words; and the laboured explanation in the recently issued Majority Report that only those who call themselves "architects" or "architects and surveyors" are intended to be recognized hardly assists the matter.

However, things are to be put right some day, and, as Mr. Butler suggests, all will be well when we are granted licences like taxi-drivers, so that members of the public who seek the services of a bona-fide architect will only have to look for the licence suspended from his office-door bell. It will be very interesting, if we have periodically to renew our licences, to be afforded an opportunity of meeting with our brother architects, who in the meantime will have removed the terms "auctioneer," "cartage contractor," "undertaker," and so on, from their notepaper. Of course, a little embarrassment may be caused for a time by those members of the profession who continue to show interest in and concern for architecture, but possibly the authority upon whom will fall the duty of serving out our badges may be equally willing to provide muzzles for rendering silent any recalcitrant members. It is all very splendid and wonderful, but some of us will continue to hope that the time is not yet.

FREDK. R. HIORNS.

The Commercial Ideal

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—My attention has just been called to Mr. L. E. Walker's letter in your issue of May 17, and I hasten to say how sorry I am that, by omitting a step in *my* argument I should appear not to be fair to *his*. Mr. Walker did, in fact, qualify his approval of quotations from Ruskin being used by furnishing firms to brag their goods into notoriety, with the condition that the goods proved to be equal to the high note struck by their announcement. Such qualification, however, begs the whole question. To say a thing is appropriate and dignified so long as it fills the condition of being appropriate and dignified is to say nothing. One might with equal force say that passages from Holy writ can fittingly be used to recommend a new hairpin so long as the high quality of the hairpin inculcated reverence and submission to the will of God. We know that no hairpin can do anything of the sort; and we know not only that the manufactures of furnishing firms do not equal the high note struck in the idealism of John Ruskin, but also that anyone whose chairs and tables reached that high level, or anywhere near it, would be incapable of vulgar commercial braggadocio. "It is the witness still of excellency to put a strange face on its own perfections." That sentiment was the common heritage of humanity until the benign influence of commerce gave pride of place to the man who most clamorously boasts his own merits, and until the apotheosis of the braggart—the reign of the publicity agent—was imposed on society. The maxim is still true, nevertheless, in every field of life except the commercial.

To sum up the case, Mr. Reginald Hallward considers that Ruskin cannot be fittingly quoted to advertise the manufactures of furnishing firms. Mr. Walker approves this view *if* the goods are fitting to be advertised by quotations from Ruskin. The question, then, stands thus: Are the manufactures of furnishing firms fit subject for advertisement by quotations from Ruskin? This is only another way of stating the question raised by Mr. Hallward, and if Mr. Walker will delete from my letter words presuming bad craftsmanship in the goods advertised by furnishing firms (though the presumption is perfectly just and in accord with Mr. Hallward's clear meaning) he will, I hope, find my opposition to his views presented not unfairly.

Mr. Walker tries to corner me—or rather tries to corner the root differences in our points of view—by supposing a particular advertisement, and challenging my objection. He imagines the attractions of the country advertised by a picture of a delightful rural scene by the hand of an eminent painter, supported by an illuminating passage from a great poet, and invites me to step into his parlour; would Mr. Creswell, he asks, quarrel with the railway company responsible for such an advertisement? It is a perfectly fair test, and I quite appreciate Mr. Walker's point. At the same time a general statement that baldness is characteristic of old men is not refuted because the person generalizing is unable to say at what point, when single hairs are pulled from his scalp, an old man becomes bald. However, I will answer the question as well as I can.

I should look at Mr. Walker's picture, then, with pleasure—possibly with great pleasure; and I should also, no doubt, derive pleasure from his quotation from Shakespeare. I should, perhaps, even enjoy a sense of refreshment. My next sensation, if my mind dwelt on the subject, would be disappointment to remember that the motive of the exhibition was merely to cadge halfpence from the public and that it was identical with the impulse which, far and wide and by a hundred devices, defaces the same countryside with unsightly hoardings. Mr. Walker may perhaps consider that I have made an admission which involves inconsistency, and that he has won his point. May I, therefore, point out first that I am not proof against the wiles of the advertising expert who uses the right baits to trap my attention; second, that my objections to advertisements—so far as I have here touched on the subject—are upon ethical and not upon æsthetic grounds; and, third, that as the thing advertised is not a substitute for suet, nor a fraudulent lung tonic, nor an unswallowable feeding-bottle teat, but the beauty of nature—the works of God—no picture nor poem can do more than pay devout homage and express admiration. Nature, too, is the special inspiration of the painter and the poet; and as the railway company is not calling attention to anything for which it can claim credit, the true condition of an advertisement is not even present. Thus it will be seen that the case for which Mr. Walker challenges my objection does not contain a single aspect to which I have taken exception. There is no element of brag; no overstatement; no appeals to greed, snobbery, prurience, hypochondria, superstition, or any of those weaknesses of human nature which advertisements usually traffic in, and there is no ugliness.

There is much I should like to say on this subject. I have confined myself to answering Mr. Walker's question. I cannot accept his invitation to discuss whether commercial men are dominated by the false ideals which I condemn, for I have already expressed my views at considerable length in the address which has provoked this correspondence, and in the several letters I have contributed to these pages, to the number of which I do not, may I say, propose to add.

H. B. CRESWELL.

A.A. New Officers and Council

Following is the result of the ballot for the officers and council of the Architectural Association for the ensuing session. The names starred (*) denote no change, and the officers for the past year are given in parentheses :—

President : Stanley Hamp, F.R.I.B.A. (W. G. Newton, M.C., M.A., A.R.I.B.A.);

Vice-presidents : L. S. Sullivan, A.R.I.B.A., Gilbert H. Jenkins, L.R.I.B.A. (F. C. Eden, M.A., and E. Stanley Hall, M.A., F.R.I.B.A.).

Hon. Treasurer : E. Stanley Hall, M.A., F.R.I.B.A. (Stanley Hamp, A.R.I.B.A.).

Hon. Editor "Architectural Association Journal" : M. T. Waterhouse, M.C., A.R.I.B.A. (M. J. Tapper, M.C., A.R.I.B.A.).

Hon. Librarian : Manning Robertson, A.R.I.B.A. (G. G. Wornum).

Hon. Secretary : J. Alan Slater, M.A., A.R.I.B.A.*

Ordinary members of Council : Past-president W. G. Newton, M.C., M.A., A.R.I.B.A., G. Gilbert Scott, R.A., F.R.I.B.A., Major H. Barnes, M.P., F.R.I.B.A.,* F. C. Eden, M.A., H. S. Goodhart-Rendel, P. D. Hepworth, A.R.I.B.A., E. J. T. Lutyens, A.R.I.B.A., H. I. Merriman, A.R.I.B.A.,* A. H. Moberly, F.R.I.B.A.,* M. J. Tapper, A.R.I.B.A., T. S. Tait, A.R.I.B.A.,* C. Cowles Voysey, A.R.I.B.A. (Cyril A. Farey, A.R.I.B.A., Gilbert H. Jenkins, L.R.I.B.A., Ralph Knott, F.R.I.B.A., A.B. Llewelyn Roberts, A.R.I.B.A., Manning Robertson, A.R.I.B.A., L. S. Sullivan, M. T. Waterhouse, M.C., A.R.I.B.A.).

The following were not elected :— T. A. D'Arcy Braddell, F.R.I.B.A., M. J. Dawson, F.R.I.B.A., G. P. Fildes, A.R.I.B.A., Oliver Hill, S. C. Ramsey, F.R.I.B.A., A. B. Ll. Roberts, A.R.I.B.A., H. A. Saul, F.R.I.B.A., Philip Tilden, T. M. Wilson, F.R.I.B.A., G. G. Wornum, A.R.I.B.A.

The Rome and Henry Jarvis Scholarships

The conditions of the Rome Scholarship and the Henry Jarvis Studentship Competitions have just been issued by the British School at Rome. This year the age limit of candidates has been reduced from thirty to twenty-seven (plus war service), and provision has been made for the payment of the expenses of candidates attending the *en loge* examination. The Rome Scholarship will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for three years. Candidates must be British subjects and less than twenty-seven years of age on July 1, 1923. Admission to compete may be granted at the absolute discretion of the Faculty to candidates over twenty-seven years of age, provided they have spent in war service at least that number of years by which their age exceeds twenty-seven. The Jarvis Studentship will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for two years. This studentship will be confined to students or Associates of the R.I.B.A. (see section "B"), but otherwise the conditions for the two awards will be the same. The competition, which will be conducted by the Faculty of Architecture of the British School at Rome, will be in two stages :—A. A preliminary competition open to approved candidates. B. A final competition open to not more than ten candidates selected from those competing in the preliminary competition.

A. The Preliminary Competition.

Application to compete in this competition must be made on the prescribed form to the Honorary General Secretary, British School at Rome, 1 Lowther Gardens, Exhibition Road, London, S.W.7, not later than October 15, 1922. The application, containing a statement of the student's qualifications, will be examined by the Faculty of Architecture, in whose absolute discretion lies the granting or refusing of permission to compete. Due notice will be given to approved candidates of the time and place of the preliminary competition, which will extend over a period of thirty-one days. The first twelve hours of the competition will be held *en loge* at approved centres, and during this time the candidate will be required to make a sketch design of the subject which will be announced at the opening of the competition. He will keep a tracing of the sketch design which he will deliver up at the end of the first twelve hours. The Faculty may at their discretion make a grant towards expenses incurred by a competitor in attending an *en loge* centre at a distance from his place of residence or study. The candidate may choose his own time and place for the execution of the finished designs, which must adhere substantially to the sketch design done on the first day. The finished designs, together with the sketch designs, will be examined by the Faculty of Architecture, who will make a selection of not more than ten candidates to compete in the final competition.

B. The Final Competition.

The first part of this competition will be held in London at the R.I.B.A., and will consist of a continuous examination of thirty-six hours *en loge*, during which time the candidate will be required to make a sketch design of the subject which will be announced at the opening of the competition. He will keep a tracing of the sketch design, which he will deliver up on its completion or at the end of the thirty-six hours. The Faculty may at their discretion make a grant, not exceeding £10, towards expenses incurred by a candidate in the final competition. In the second part of this competition candidates will be allowed for the execution of their finished designs a period not exceeding twelve weeks. Candidates may complete their designs, which must adhere substantially to their sketch designs, in their own time and place. The successful candidate in this competition will be recommended for appointment to the Rome Scholarship, and the student or Associate of the R.I.B.A. who is placed next in order of merit will be recommended for appointment to the Jarvis Studentship.

General.

All finished drawings must be sent to the Honorary General Secretary, British School at Rome, c/o The Secretary, Royal Institute of British Architects, 9 Conduit Street, W.1, at the candidate's expense, and will be returned to him at his expense. Due care will be taken of all drawings submitted, but the Faculty will not hold themselves responsible for any loss or damage. Each drawing must bear a pseudonym. A sealed envelope bearing the pseudonym on the outside and enclosing the name of the candidate and a declaration that the finished designs have been wholly designed and executed by him without the collaboration and assistance of anyone, must be forwarded to the Honorary General Secretary, 1 Lowther Gardens, Exhibition Road, London, S.W.7, so that it may reach him on or before the date fixed for the receipt of the finished drawings. Under no circumstances should the sealed envelope be attached to the drawings. The Faculty reserve to themselves the right, at their absolute discretion, to exclude any candidate from the competition, to alter any of the conditions, periods, dates, or times herein specified, and to decline to hold the Final Competition, or to select any candidate for it, or to make any recommendation for the awards. The Faculty also reserve to themselves the right to publish photographic reproductions of, or exhibit, any of the works submitted by competitors.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Sale of National Art Treasures.

During the debate on the second reading of the Finance Bill in the House of Commons, Sir Philip Sassoon referred to the dispersal of our National art treasures and their sale to foreign countries, and to the problem of how to check the process before the nation suffered further irreparable loss. It was part of the duty of the House to safeguard and preserve the nation's works of art, and he appealed to the Government to take immediate steps to this end with regard to what was left of the unique art possessions in private hands. The Treasury should be empowered to make from time to time special grants for extraordinary emergencies to the National Gallery, so that the National Gallery might be able to purchase for the nation some few at least of the finer works still left in this country.

Mr. Hilton Young, Financial Secretary to the Treasury, in reply, said that it was impossible not to feel sympathetic towards the appeal, because art treasures were a great national asset, the diminution of which it was impossible to witness without the deepest regret. The matter, however, could not be raised as a revenue question. There could be no question of raising any revenue at all worth considering in regard to the export of our treasures. The real purpose would be to prevent their export, and not to raise revenue. As to raising grants for the purchase of works of art, there was no purpose which the Treasury would rather assist in the highest interests of the welfare of the nation, but when depressed trade and unemployment were so great, there could be no question of providing further money even for such a desirable object.

Magazines of the Month*

A Literary and Pictorial Digest

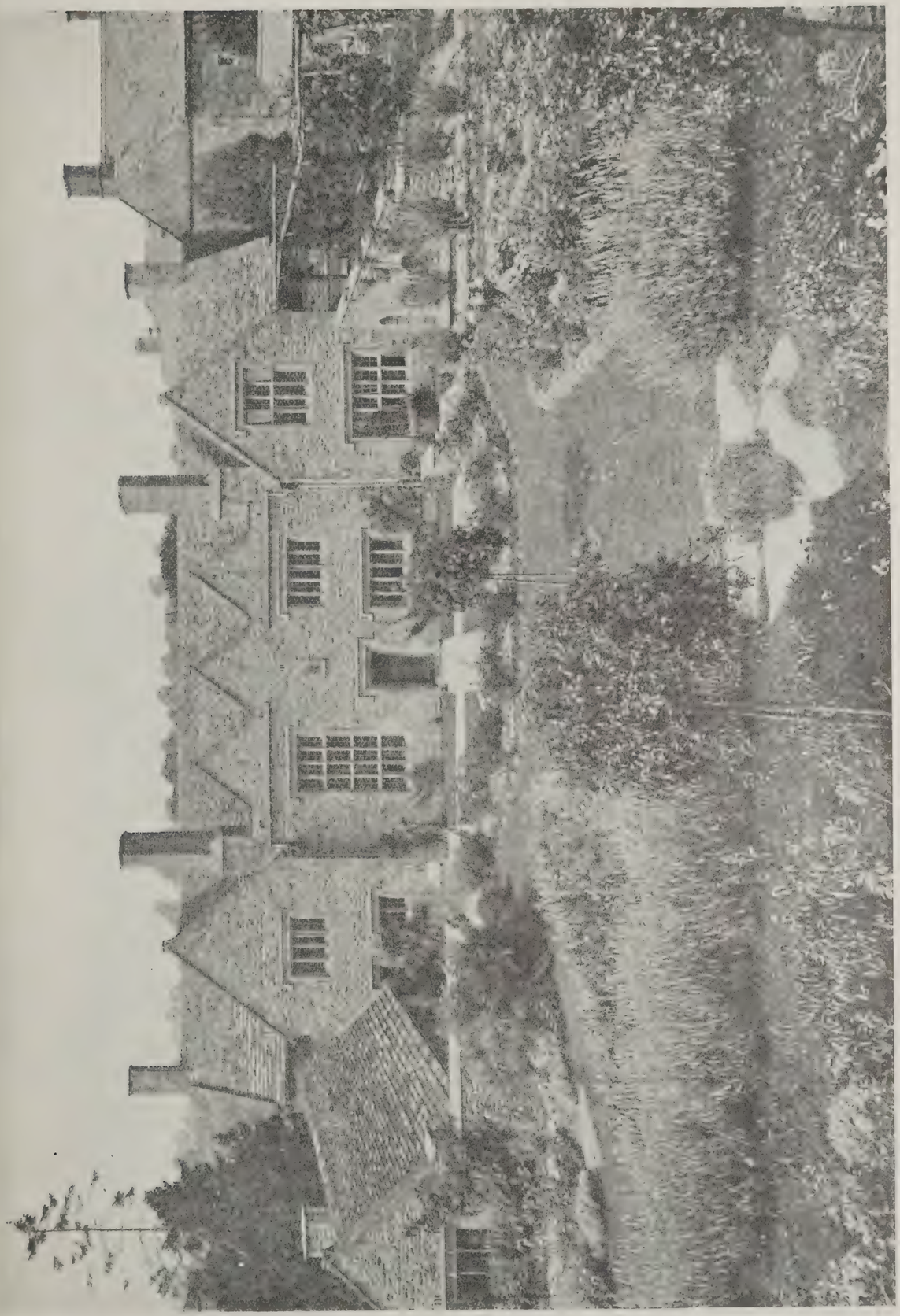
THE June number of THE ARCHITECTURAL REVIEW, which has just appeared, turns out to be the long awaited "British Domestic" issue. It is a double number, and contains all the best modern domestic architecture in England and Scotland, including a selection of the finest recent works of Ernest Newton. From such an immense quantity of good work it is impossible to single out individuals for special praise, but certainly one of the most unassuming and most English bits of architecture in the whole issue is Mr. Hubert Worthington's group of cottages at Knutsford, Cheshire, illustrated below. These cottages were built for a groom and a chauffeur at the corner of two roads, and the "L" plan was employed in order to catch as much sunlight as possible. The other illustration shows a house near Banbury by M. H. Baillie Scott—one of the big traditional houses for which he is so justly famous. Newton's most fascinating work is shown in colours as the frontispiece of the REVIEW, and displays at the same time the fine draughtsmanship of Alick Horsnell. The handling of the subject is entirely sympathetic and sensitive. Mr. H. S. Goodhart-Rendel contributes also to this issue a note on "Modern British House Planning," and the Editor of THE ARCHITECTURAL REVIEW, Mr. W. G. Newton, prefaces the number with an article on "Taste in Architecture," in which he urges the lay newspapers and reviews to take up intelligent criticism of architecture.

Kenwood, the historic Adam house at Hampstead, which is up for sale, has recently been visited by the Architectural Association, and an interesting article upon its architecture appears in the May issue of THE A.A. JOURNAL. Charing Cross is only four miles away, yet standing before the house, "the nesting rooks, the stable bell, the absence of all suburban noise, would convince you against reason that you had passed a hundred miles up the drive from the lodge on the Spaniards Road. "The estate had belonged in the early part of the eighteenth century to the Duke of Argyll, but in the 'sixties of the same century it was purchased by William Murray Baron Mansfield, who consulted the fashionable Robert Adam about improving the place. Adam planned it with the utmost simplicity : a large entrance hall with staircase halls left and right, and rooms *en suite* behind these, produced at one end into an orangery, at the other into a library, the kitchens occupying a site of their own. "Within the house," says the writer, "there are no passages. Adam's five per cent. was not paid him for a plan like a jig-saw puzzle, but for the development of sympathetic cubic spaces in which a gentleman might read, entertain his guests, stake his fortune at cards, and relish the whimsical game of life. This is the feeling of these cool rooms, opening one into another like cells of a temple. The large library is the ceremonial room of the house; the books are neatly arranged within the decoration, their backs made to contribute to the elegant colour-scheme. The room is a splendid oblong lengthened by the addition of segmental apses beyond columns. The ceiling (illustrated on p. 828) is a curve of the same degree, and provides a graded expanse for the filigrees and frets surrounding the little panels by Antonio Zucchi. The grounds of the panels and friezes are coloured with pale pinks, buffs, greens, and blues in which are a few violet fans, the whole designed by Robert Adam himself, in his own words, 'so as to take off the glare of white so common in every ceiling till of late . . .' On the first floor there is a fine room over the entrance hall, lit by three tall sashes. . . . It contains, among other things, a Japanese-coloured mantelpiece . . . Only the centre block and portico of the north front is the work of the Adam brothers; the wings in galt brickwork are later. The south front stands to-day, however, as it was designed. The Roman cement walls have weathered well, and stand upon a stylobate of Portland stone gone a snowy white." The writer ends with the following paragraph : "We have not yet heard that Kenwood is saved. The inscrutable Fates that control the family fortunes of British buildings, ruthless to some, kind to others, have added it to a list already too long. Kenwood, Devonshire House, Keats' House, Hampstead, the Assembly Rooms at Bath, and many others, are waiting to know the ironic will of an age which admires but destroys."

* All the above magazines may be seen in the Reading Room at 29 Tothill Street.

COTTAGES AT KNUTSFORD, CHESHIRE. HUBERT WORTHINGTON, M.A., ARCHITECT

(*From the Domestic Number of "The Architectural Review."*)



"HOME CLOSE," SIBFORD, NEAR BANBURY. M. H. BAILLIE SCOTT, ARCHITECT.

(From the Domestic Number of "The Architectural Review.")

The design of Central Asian Rugs, and the "Evolution of Modern Mezzotint in Colour," are amongst the things dealt with by the current issue of THE CONNOISSEUR. There is also an article of especial interest to architects on the Horne Collection in Florence, which is illustrated by many photographs of the priceless works of art which the collection contains. It has been given to the city of Florence by Mr. H. Horne, "a gifted and generous Englishman," and is housed in the delightful Corsi Palace which Mr. Horne purchased some years ago. It is shortly to be opened to the public. "Horne," says the writer, "was not a wealthy man, but a born treasure-hunter, who was gifted with an extraordinary sense for the beautiful, and he succeeded, little by little, in discovering in the back rooms of the antiquarian shops, in small sales, and in unlikely places, a number of works of art which his instinct revealed to him. . . . In comparison with the new and latest collector, who in a few months or in a few weeks, has made a collection of works of art or antiquity without troubling himself to do anything more than just sign a number of cheques, a connoisseur like Mr. Horne appears all the more attractive." The Corsi Palace which contains the collection, and is therefore now called the Horne Museum, is very probably the work of Giuliano da Sangallo, and must have been built between 1488 and 1492, the period of the

KENWOOD: THE LIBRARY CEILING. FROM A PHOTOGRAPH BY F. R. YERBURY.

(*From the "Architectural Association Journal."*)

THE HORNE MUSEUM, FLORENCE: ORIGINALLY THE CORSI PALACE.
(*From "The Connoisseur."*)

magnificent Florentine activity of Sangallo, when he constructed the villa at Poggio à Cajano, the Gondi Palace, and the Sacristy of St. Spirito. "This Palace," proceeds the writer, "is one of the most harmonious and noble private buildings in Florence." In the rooms on the first floor the collection is now arranged as in a wealthy abode of the Renaissance. Mr. Horne concentrated chiefly upon objects of domestic and ornamental use in the time of the Renaissance, but he also discovered pictures and pieces of sculpture. He found an extremely rare seat of the fifteenth century, in the form of a well, and a picture of St. Stephen which is either by Giotto or by one of his pupils. He also found a unique fifteenth-century Florentine carpet, a wooden statue by Vecchietta, representing St. Paul, some magnificent wooden *cassoni*, and furniture of the sixteenth and seventeenth centuries; a little *torso* by Gian Bologna, a little *Madonna* by Taddeo Gaddi, a little *Crucifixion* by Bernardo Daddi, a *Madonna* by Naddo Ceccarelli, a large *Crucifixion* by Benozzo Gozzoli, a *Redentore* attributed to della Francesca, a great *St. Roch* by Bartolomeo della Gatta, a rich assortment of fourteenth and fifteenth-century pots and pans, a most precious collection of table knives and forks, various objects such as spinning-wheels, playing-cards, and glasses, and besides these a collection of engravings and drawings, among them a sketch-book of Tiepolo's, sketches by Salvator Rosa, and drawings by Raphael, Andrea del Sarto, Parmigianino, Guardi, Poussin, Claude, and Gainsborough. Another room in the palace contains a great library of books on art. Altogether the collection is quite unique, and those architects who are spending their summer holidays in Florence will do well to make a special feature of their visit to the Horne Museum.

The JOURNAL OF THE LONDON SOCIETY contains a paper by Sir Joseph Broodbank on "Progress in the Port of London," with a fine air-view of the Albert Dock.

L'ARCHITECTURE of Paris contains, amongst other things, the selected design for the "Monument to Victory," which is to be erected at Verdun as a Memorial to the heroic defenders of the city. This monument forms a part of the ancient rampart of the old town, and is described as follows by the Jury formed to assess the competition, consisting of MM. Poincaré, Coutan, Deglane, Prouve, and Ventre :—

"The design submitted by M. Chesnay, architect, is at the back of the square du Maréchal Pétain, abutting on the old ramparts. It consists of a mass of masonry, 13 metres wide by 15 metres high, standing on a huge plinth and surmounted by a group of allegorical figures, the work of the sculptor Jean Boucher, representing the soldiers of Verdun and French Victory. To right and left of the monument wide staircases lead to the square. The plinth forms the entrance to a crypt constructed in the Pétain Square. In this crypt will be placed the tombs of seven unknown soldiers entrusted to the city by the nation. It will also contain the golden books in which will be written the names of all the French and allied soldiers who fought for Verdun. The whole monument will have a total height of 27 metres, and is large enough to stand

MONUMENT TO VICTORY AND TO THE SOLDIERS OF VERDUN.
LÉON CHESNAY, ARCHITECT.
(*From "L'Architecture."*)

out sharply from the neighbouring buildings. From the principal points of view it will, as is only fitting, dominate the town."

The May ARCHITECTURAL RECORD of New York contains interesting articles on "Architectural Polychromy," on "Tendencies in Apartment House Design," and on "Recent Park Planning in German Cities." There is also a finely illustrated article, "A Country House in the Italian Manner," the residence of Mr. J. L. Bushnell, which has been designed by Mr. L. C. Albro. The house stands on a street, but is separated by a long brick wall and a formal terrace, also of brick, with terra-cotta water-jars and a circular pool. "The design of the front which faces this terrace is of the symmetrical character of a 'garden front,' with its gracious loggia and balanced masses to right and left. The colour of the stucco is a quiet cream tone, and the ironwork is detailed with pleasant simplicity." The windows are framed by blue-green shutters, and the whole building has an overhanging wood cornice, stained brown, and polychromed. A distinct note of interest is added to the loggia by the colouring of the plaster vaulting in blue. The entire width of the loggia is taken up by the hall; on the left of this is the living-room, and on the right the dining-room and breakfast porch. Behind and at right angles is disposed the service wing. The drive runs round this service wing to a turn-around, where steps and a terrace lead up to the carriage entrance, which is at the back of the hallway, and is illustrated on this page. This entrance is an exceptionally pleasing piece of design. The illustration depicts the clever way the Americans have of using trees and bushes to the advantage of their architecture.

A HOUSE AT SPRINGFIELD, OHIO.
L. C. ALBRO, ARCHITECT.
(*From "The Architectural Record."*)

A HOUSE AT MONTECITO, CALIFORNIA: GARDEN POOL. R. D. JOHNSON, ARCHITECT.
(*From "The American Architect."*)

THE AMERICAN ARCHITECT of New York contains illustrations of the winning awards in the Le Brun Travelling Scholarship Competition for 1922, and an article upon the Nebraska State Capitol, which is being erected from the designs of Mr. B. G. Goodhue, an American who has a special place in English hearts. A house at Montecito, California, is also illustrated, or, rather, the garden of the house, one view of which is reproduced here as a delightful example of garden architecture.

In addition to its standing features PENCIL POINTS, of New York, includes the second part of an article by H. W. Corbett on "Architectural Models of Cardboard," and a "Vocabulary of Atelier French" (Part II), in the introduction to which it is suggested that the vocabulary will be of use to students in American ateliers. We select a few of the easier terms, hoping that students will introduce them into our English studios. *chateau* = a castle, also a palatial country residence; *crayon* = a pencil; *critique* = a criticism; *camouflage* = the art of disguising. There is also an important word which should be used when speaking to the studio master. This is *Coquard*, which means "an old rooster," or in the slang "a pretentious and ridiculous old fellow."

Enquiries Answered

Professional Fees.

"Reader" writes:—"Mr. Emerson's article in your issue for April 26 does not touch upon a number of points which perplex architects from time to time. In the case of an hotel building, is the architect justified in charging on the Institute scale as regards engineering equipment, *e.g.*, cooking apparatus or refrigerating plant? The architect has a certain responsibility as regards the equipment, but it can hardly be said that he designs it, or that his responsibility is the same as for, say, the heating apparatus upon which the architect as a rule well earns his fees. Take also the case, which is not uncommon of drawings prepared for builders—the architect accepting no responsibility for carrying out the work. Clause 5 is hardly applicable in such cases."

—Dealing with the first part of your correspondent's query, the architect, if responsible for the general planning and installation of the cooking apparatus, refrigerating plant, and any other special fitments, would be following the usual practice in basing his fees upon Clauses 1 or 2 in the Scale of Professional Charges. There are a large number of items included in a building, such as steelwork, baths, lavatories, stoves, mantels, electric lighting, gas, etc., for which the architect does not prepare designs; they form part of the structure, and are charged for at the percentage governing the contract. That the apparatus under discussion is not of everyday use in the equipment of a building makes no material difference. If the architect were called upon to design the fitments he would be entitled to base his fees under Clause 3.

Regarding the second portion of his query, it is usual when an architect prepares plans for a builder client, to agree a fee upon a percentage or time basis that would be remunerative for the work involved. In the absence of such an agreement the architect could charge under Clauses 1 or 2 a percentage in proportion to the work involved, but not exceeding two-thirds of the fees provided in these clauses, for complete working drawings and specification. Clause 5 is intended for work which is wholly or partially abandoned, and is not applicable to the class of work under review.

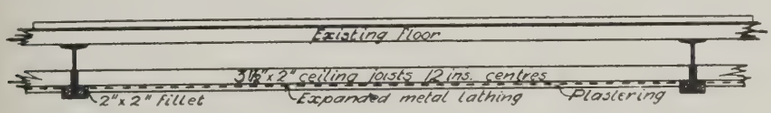
H. M. E.

Reduction of Sound through Floor.

F. T. writes: "How can I construct a floor to prevent noises being heard between one room and another? I am dealing with an existing building in which there are two assembly rooms, one above the other. The floor between is of steel beams, with a covering of 3 in. tongued planking, asbestos sheets, and maple boards. There is no cavity or underdrawing. The upper floors are used for whist drives and dances, and considerable inconvenience is caused by noise to the tenants of the lower assembly room."

—The existing floor of rolled steel joists and planking cannot actually be formed as shown in the sketch submitted because the joists and planks are in the same direction. Assuming, however, that there are no fir joists, and that the planks run across the rolled joists, the distance from centre to centre of the rolled joists would probably be somewhere about 9 ft. or 10 ft. No ceiling is shown under the rolled joists, but one could be formed as shown in illustration herewith. This might not eliminate all the noise, but would go a long way towards doing so. The metal lathing might run below the rolled steel joists, and the plaster be carried round.

HENRY ADAMS.



(See answer to F. T.)

Wages and Hours

The National Wages and Conditions Council for the Building Industry, at its meeting on May 26, having considered the position arising from the resolution passed at the meeting on March 17, resolved:—

1. That the second reduction mentioned in the resolution referred to be confirmed.

2. That the wages resulting from the application of the resolution remain stabilized until March 1 next.

3. That the hours of work resulting from the application of the resolution, 44 hours per week, reduced to 41½ during December and January, remain stabilized until March 1 next.

4. That at the statutory meeting in January the Council reconsider the position, with a view of providing for both hours and wages as from March 1 next.

5. That within three months from the date of this decision, a National rule be made to provide that walking time, where allowed, shall be paid for at ordinary time rates, and shall not be counted as part of the eight-hour day, the intention being to secure an actual working day of eight hours.

6. That the effect of the application of the last clause of the resolution of March 17 shall be to make the rates of wages payable to craftsmen and labourers engaged in the building industry as detailed below:—

Craftsmen's Rates on April 1, 1922

1/10	1/9½	1/9	1/8½	1/8	1/7½	1/7	1/6½	1/6	1/5½	1/5	1/4½	1/4

Craftsmen's Rates on June 1, 1922

1/8	1/7½	1/7	1/6½	1/6	1/5½	1/5	1/5	1/4½	1/4	1/4	1/3½	1/3

Labourers' Rates on June 1, 1922

1/3	1/2¾	1/2¼	1/2	1/1½	1/1¼	1/0¾	1/0¾	1/0½	1/–	1/–	–/11¾	–/11¼

7. That the eight-hour day shall be worked with one break, reasonable time being allowed for adjustment where a two-break system now operates.

A. G. WHITE, Employers' Secretary.
R. COPPOCK, Operatives' Secretary.

A. J. LLOYD, Clerk to the Council.

New Inventions

Latest Patent Applications.

14294.—Beierbach, H.—Building-unit. May 20.

14169.—Charpentier, J. A.—Building. May 19.

13819.—Clark, E. E.—Device for decoration of interiors. May 16.

13876.—Dean, C.—Kilns for burning, etc., terra-cotta tiles, glazed bricks, etc. May 17.

13631.—Dwyer, C. W.—Preparation for destroying wood-worm and process for preserving the wood. May 15.

13814.—Jones, A. B.—Building-blocks. May 16.

Specifications Published.

179391.—Schonfield, W.—Apparatus for opening casement, also termed "french," windows, fanlights, and the like.

172021.—Lechat, E.—Moisture-tight building block.

Abstract Published.

177709.—Laying mortar.—Mr. J. S. Rigby, 11 Hilbre Street, Liverpool.—An appliance for laying mortar on hollow bricks, slabs, or building-blocks consists of two pairs of angled bars forming mortar channels; the bars are connected laterally by braces, and the outer bars are preferably adjustable on arms. In use, the bars rest on and bear against the bricks already laid and the bars clip over the outer edges thereof. Spring arms are fitted to the braces to engage the hollows.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, W.C. 2, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

"Architect — not a Gentleman!"

Mr. Harry R. Finn, L.R.I.B.A., has sent us the following passage from the "Weekly Dispatch," which he rightly suggests is much too good to be utterly lost.

It occurs in the course of an article on "Too Truthful Children" and runs thus:—

"A friend of mine who had taken her family to Hyde Park was sitting in the front row of chairs, her husband, with one of the little girls, being behind, when the collector came round. 'The gentleman behind will pay,' she said, indicating her husband.

"'Mother!' protested her four-year-old boy. 'Daddy isn't a gentleman! He's an architect!'"

Coming Events

Thursday, June 8.

R.I.B.A. Public Lecture: "What is Architectural Design?" By Mr. D. S. MacColl, M.A., LL.D., Keeper of the Wallace Collection. 5 p.m.

R.I.B.A. and Allied Societies' Conference at Cardiff (three days).

Saturday, June 10.

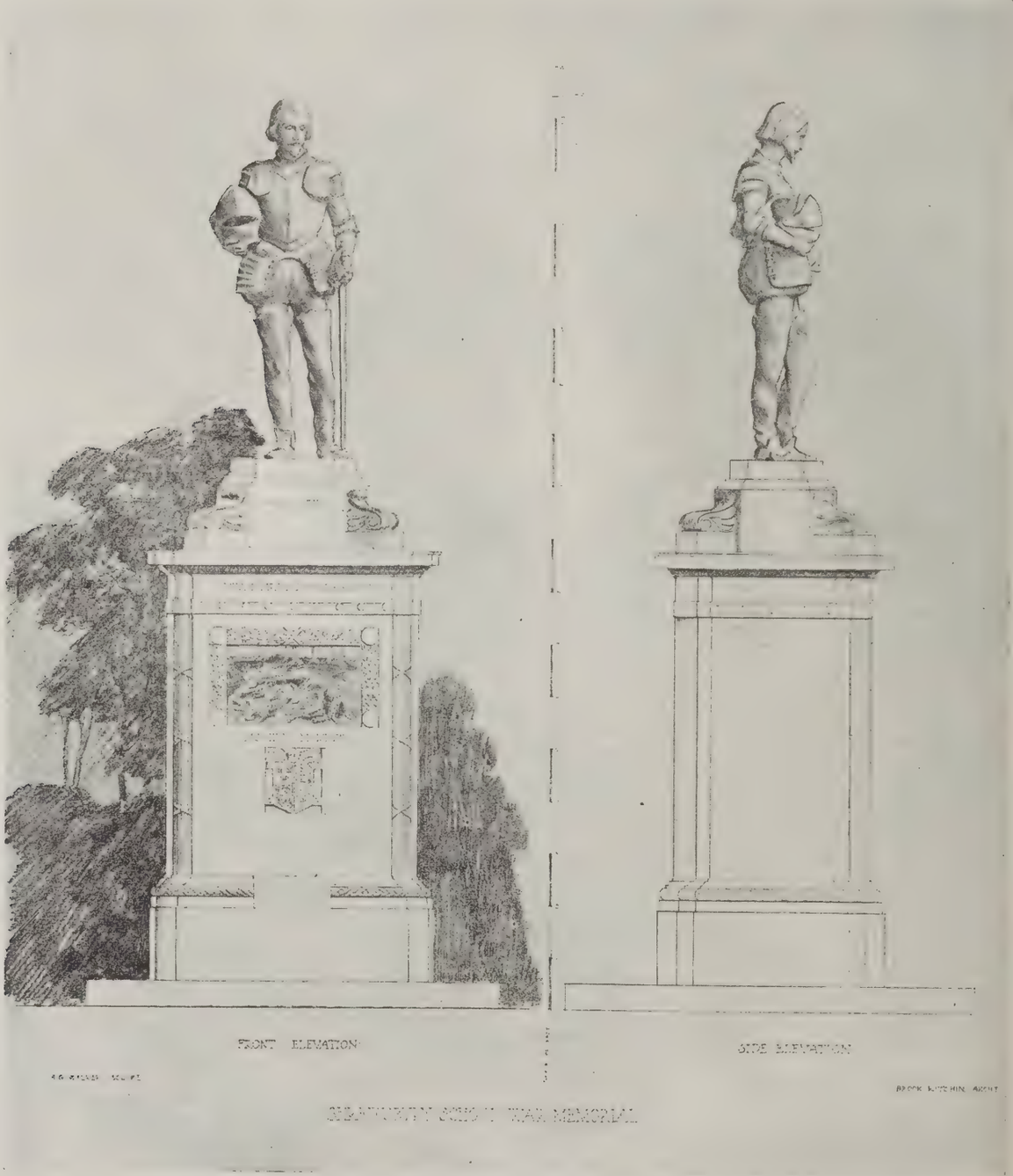
Edinburgh Architectural Association.—Visit to the premises of Messrs. Wallace, Scott & Co., Ltd., at Cathcart, Glasgow.

Thursday, June 15.

R.I.B.A. Public Lecture: "Some London Streets and their Recent Buildings." By Prof. C. H. Reilly, Roscoe Professor of Architecture, University of Liverpool. 5 p.m.

Brass Casting Research

The British Non-Ferrous Metals Research Association have carried out an extensive research on the influence of gases on high grade brass. A further investigation is now being started by the Association at the Research Department, Woolwich, in which the support of the Engineering Co-ordinating Board of the Department of Scientific and Industrial Research has been secured. The prime object of the present work is to study th conditions necessary for securing bot surface and internal soundness of stri brass ingots such as are required for col rolled sheet metal. The investigatio will throw much light on other types o casting in non-ferrous alloys and shoul interest a wide circle of manufacturers i the metal and engineering trades. Dr Harold Moore, O.B.E., and Mr. B Genders, B.Met., who have already bee engaged successfully on similar work, wil have charge of the research, which wil be conducted partly in the works of mem bers of the Association and partly in th Woolwich laboratories. The address o the Association is 71 Temple Row Birmingham.



SHREWSBURY SCHOOL WAR MEMORIAL. BROOK KITCHIN, F.R.I.B.A., ARCHITECT.

We illustrate above the Shrewsbury School war memorial in its principal visible form—a bronze statue of Sir Philip Sidney, executed by Mr. Arthur G. Walker, on a pedestal designed by Mr. Brook Kitchin, an Old Salopian. This will stand at the entrance end of "Central" at the school.

The Week's News

Architect's £85 Will.

Major Charles James Pawley, of Mel-ury Road, Kensington, the architect who riginated the scheme for an Empire War emorial at Westminster, left £85.

ritish Empire Chamber of Commerce.

The British Empire Chamber of Com-ierce in the United States of America is ow situate at Cunard Building, 25 roadway, New York.

New Medical Research Laboratory.

Mr. F. N. Pickett, chairman of the anagement committee of St. Paul's ospital, Holborn, has given £15,000 for research laboratory to form part of the ew hospital now being built in Endell treet, W.C.

Mons Cross of Sacrifice.

At the cemetery of Mons, in the middle f hundreds of Canadian, British, South frican, and French graves, the Cross of acrifice has been unveiled and handed ver to the town on behalf of the Imperial Var Graves Commission.

The Surveyors' Institution.

The Surveyors' Institution have elected Ir. John McClare Clark (Northumber-and) president for the ensuing year, and Ir. J. I. Davidson (Scotland), Sir Edwin avill (London), Mr. J. D. Wallis (Lan-ashire), and Mr. Dendy Watney (Lon-on), vice-presidents.

Reconstruction of Belgian Stockade.

His Majesty's Consul-General at Ant-verp has reported to the Department of Overseas Trade that the Belgian Minister f Public Works has decided upon the econstruction of the stockade at the nouth of the River Rupel above Ant-verp, and that tenders for this important vork will shortly be called for.

The Late Mr. C. E. P. Harrison.

It is with deep regret that we announce he death of Mr. C. E. P. Harrison, of Stowmarket, architect, at the age of 23. Mr. Harrison was for some time in the office of Messrs. Hunt and Coates, archi-ects. His death occurred in a nursing ome, following an operation under an naesthetic.

The R.I.B.A. Royal Gold Medallist.

Mr. Thomas Hastings, of New York, Royal Gold Medallist 1922, will arrive in England about June 23 accompanied by Mrs. Hastings and several friends. He vill be present with Mrs. Hastings at the R.I.B.A. Council dinner on June 26, and ie will receive the Royal Gold Medal in person at a general meeting on the same evening.

The Society of Architects' Lodge No. 3244.

At a regular meeting of the Society of Architects' Lodge No. 3244, held at the Holborn Restaurant, Mr. Ernest E. Jenkin (Licentiate Member of the Council) of Exeter, was initiated, and Mr. C. E. Gamon (Fellow), the present Master of the Accra Lodge, Gold Coast, was elected as a joining member. Mr. Thos. Wallis, the Senior Warden, was elected as Master for the ensuing year, and Mr. W. Hoe as Treasurer. The congratulations of the Lodge were offered to Mr. E. J. Sadgrove, a Past Master and present Treasurer of the Lodge, on the honour conferred upon him, and through him upon the Lodge, by his appointment to the office of Assistant Grand Superintendent of Works in the Grand Lodge of England.

Sir W. Noble Joins the G.E.C.

Sir William Noble, who has just retired from the position of engineer-in-chief to the Post Office, has accepted a seat on the board of the General Electric Co., Ltd. We understand that Sir William Noble proposes to devote his attention mainly to the development of the telephone and wireless sections of this important manufacturing concern.

Housing in Great Britain.

The National Housing and Town Planning Council have decided to ask the Prime Minister, the Chancellor of the Exchequer, the Minister of Health, and the Secretary for Scotland, to receive a deputation representative of the whole of Great Britain, appointed for the purpose of submitting the case in favour of entering upon the second constructive stage of a great national housing endeavour.

Manchester Housing and Health Exhibition.

Great progress is being made with the arrangements for the Manchester Housing and Health Exhibition, which is to be held at the City Hall, Manchester, from June 23 to July 5. The various methods of using gas and electricity in the home are to be shown by the Corporation, and the exhibits by firms will form an interesting survey of the many trades allied to home life. An attractive garden is to be specially laid down in the hall.

Architectural Partnership.

Mr. H. Cyril Chatfeild Clarke, son of the late Mr. Howard Chatfeild Clarke, P.P.S.I., F.R.I.B.A., of 102 Bishopsgate, E.C., has entered into partnership with Mr. Charles H. Gregory, P.A.S.I., of Gwydir Chambers, 104 High Holborn, London, W.C., 1. The new firm will practise as architects and surveyors under the style of Gregory and Chatfeild Clarke at the above address. Telephone number Chancery 8410.

Nash's House to Go.

The southern section of the Regency house with the forecourt and wings in Lower Regent Street is to be demolished and the Crown is inviting tenders for an eighty-eight years' lease of the site. The portion to be demolished is particularly interesting as it was John Nash's own town residence. In 1849 its long saloon opened as the "gallery of illustration" with a series of thirty-one dioramic pictures of the overland routes from Southampton to Calcutta.

Ulster Society of Architects.

The quarterly meeting of the Ulster Society of Architects has been held at Belfast under the presidency of Mr. J. St. J. Phillips, A.R.I.B.A., vice-president. Mr. Gordon O'Neill was elected member, Mr. Benjamin Couser associate, and Messrs. A. E. Jury, H. T. Armstrong, E. G. Morgan, and J. W. Nethery as students. The hon. sec. announced that the prize drawings of the R.I.B.A., which included the British School at Rome Scholarship Awards, would shortly be on loan to the public exhibition in the free library.

The Late Mr. Charles Clegg.

It is with deep regret that we announce the death of Mr. Charles Clegg, of Manchester, architect, at the age of ninety-four. Mr. Clegg was the pioneer of lofty warehouse-building in Manchester, and was the architect for the erection of the Calico Printers' Association buildings, York buildings, and the Imperial Hotel, Blackpool. He was the oldest member of the Manchester Association of Architects. He was the head of the firm of Messrs. Charles Clegg and Son, architects, of Brown Street, Manchester, but had taken no active part for the last ten years in the business, which has been carried on by his eldest son.

Presentation to Mr. G. Northover

Mr. George Northover, late editor of the "Journal of the R.I.B.A.," has been presented with a testimonial by past and present members of the Literature Standing Committee of the R.I.B.A. The testimonial, which is in the form of an address on vellum, with a gold frame and ebony inlay, reads as follows :—

To GEORGE NORTHOVER

We, past and present Members of the Literature Standing Committee of the Royal Institute of British Architects, desire to record our appreciation of the services rendered by you during the 28 years of your association with the Committee as Editor of the Journal our personal esteem and affection for you, and our sense of your devotion to the highest interests of the Institute

(Signed) HENRY M. FLETCHER,
Chairman of the Literature Standing Committee.

On behalf of—

Patrick Abercrombie, Louis Ambler, W. H. Ansell, Frank T. Baggallay, John Bilson, Detmar J. Blow, H. Chalton Bradshaw, Martin S. Briggs, Lionel B. Budden, J. J. Burnet, Hubert C. Corlette, E. Guy Dawber, Rudolf Dircks, A. Trystan Edwards, Theodore Fyfe, H. Austen Hall, Fredk. R. Hiorns, Frank Lishman, Walter J. Millard, A. H. Moberly, William G. Newton, Charles A. Nicholson, David Barclay Niven, Herbert Passmore, Stanley C. Ramsey, Charles E. Sayer, F. M. Simpson, Harry Sirr, J. Alan Slater, Arthur Stratton, A. Brumwell Thomas, C. Harrison Townsend, F. W. Troup, W. Henry Ward, Edward Warren, P. Leslie Waterhouse, Herbert Wigglesworth, Edmund Wimperis, Hubert Worthington, H. H. Statham.

Rates of Wages in the Building Trades*

The following table shows the rates of wages to operate from June 1, 1922, for craftsmen (bricklayers, masons, carpenters and joiners, woodcutting machinists, slaters, plumbers,* plasterers, painters †) and labourers in the building industry. The labour rates for London are given in the Table of Current Prices on pages xxi, xxii.

District.	Grade A.		Grade B.		Grade C.		Grade D.	
	Craftsmen.	Labourers.	Craftsmen.	Labourers.	Craftsmen.	Labourers.	Craftsmen.	Labourers.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
North East Coast	1 8	1 3	—	—	—	—	—	—
Yorkshire	1 8	1 3	1 6½	1 2	1 4½	1 0½	—	—
North Western Counties‡	1 8	1 3	1 6½	1 2	1 4½	1 0½	1 4	1 0
Midland Counties	1 8	1 3	1 6½	1 2	1 5	1 0¾	1 4	1 0
Eastern Counties	1 4½	1 0½	1 4	1 0	1 3	0 11¼	—	—
Southern Counties	1 4½	1 0½	1 4	1 0	1 3	0 11¼	—	—
South Western Counties§	1 8	1 3	1 6	1 1½	1 4½	1 0½	1 3½	0 11¾
South Wales	1 8	1 3	1 4	1 0	—	—	—	—
Scotland	1 8‖	—¶	1 7	—¶	1 6	—¶	—	—

* In the case of towns printed in *italic type* below, the rates shown in the Table for craftsmen do not apply to plumbers.
† Except in Scotland.
‡ Excluding Liverpool and Birkenhead, where the rates are 2s. 3d. for plumbers, 2s. 2d. for other craftsmen, and 1s. 9d. for labourers.
§ In the South Western Counties the Grades are known as "Grades I, II, III, and IV."
‖ In the case of bricklayers, masons and labourers employed by members of the Scottish Building Contractors' Association in the Glasgow and West of Scotland district, the rates are 1s. 10d. for craftsmen and 1s. 5d. for labourers.
¶ In Scotland, labourers are not included in the general grading scheme.

Grading of Towns.

The localities in which the above rates have been reported to be in operation are as follows. In the case of localities printed in *italic type*, the rates shown in the above Table for craftsmen do not apply to plumbers.

NORTH EAST COAST :—
Birtley, Bishop Auckland, *Blackhill, Blyth, Chester-le-Street, Consett, Darlington, Durham, Gateshead, Hartlepools, Hebburn, Hexham, Jarrow, Lanchester, Leadgate, Middlesbrough, Morpeth, Newcastle, North and South Shields, Seaham Harbour, Shotley Bridge, Stanely, Stockton, Sunderland, Thornaby, Tynemouth, Wallsend, Whitburn,* and *Whitley Bay.*

YORKSHIRE :—
Grade A.—*Barnsley, Batley, Bingley, Birstall, Bradford, Brighouse,* Calder Valley, Castleford, *Cleckheaton, Colne Valley, Crosshills, Dewsbury, Doncaster, Gomersal,* Grimsby, *Guiseley, Halifax, Harrogate, Hebden Bridge, Heckmondwike,* Holmfirth, *Horbury,* Huddersfield, Hull, *Ilkley,* Immingham, *Keighley, Leeds, Liversedge, Mexborough, Mirfield, Morley, Normanton, Ossett, Penistone,* Pontefract, Pudsey, *Rawdon, Rotherham,* Scunthorpe, *Selby, Sheffield, Shipley, Sowerby Bridge, Stocksbridge, Wakefield, Wombwell, and Yeadon.*
Grade B.—Barnoldswick, Beverley, Bridlington, Goole, Hornsea, Scarborough, Skipton, *Whitby,* and York.
Grade C.—Driffield, Kirby Moorside, Malton, Norton, Pickering, and Wetherby.

NORTH WESTERN COUNTIES :—
Grade A.—*Accrington,* Adlington, *Alderley Edge, Altrincham, Ashton-under-Lyne, Atherton, Bacup,* Barrow, Birkdale, Bispham, *Blackburn,* Blackpool, Blackrod, *Bolton,* Broughton (Flints), *Burnley, Bury,* Carlisle, Chester, Chorley, *Church,* Cleveleys, *Clitheroe, Colne,* Connahs Quay, Dalton-in-Furness, *Darwen, Denton, Droylesden, Eccles, Farnworth,* Fleetwood, Frodsham, *Glossop, Great Harwood, Haslingden,* Hawarden, Helsby, *Heywood,* Higher Kinnerton, *Horwich, Hyde,* Lancaster, *Leigh,* Leyland, *Littleborough,* Longridge, Lymm, Lytham, *Manchester, Middleton,* Morecambe, *Mossley, Nelson, Ormskirk, Oswaldtwistle, Oldham, Padiham, Pendlebury,* Poulton, *Preston, Prestwich,* Queensferry, *Radcliffe, Ramsbottom, Rawtenstall, Rishton, Rochdale,* Runcorn, St. Anne's-on-the-Sea, St. Helens, *Saddleworth, Sale, Salford, Shaw,* Shotton, Southport, *Stalybridge, Stockport, Swinton,* Thornton, *Todmorden, Tyldesley, Walkden, Warrington,* Westhoughton, *Whalley, Whitefield,* Widnes, Wigan, and *Wilmslow.*
Grade B.—Askam, Broughton, Buxton, Cleator Moor, Congleton, Coniston, Crewe, Distington, Egremont, Grange-over-Sands, Harrington, Knutsford, *Macclesfield,* Maryport, Market Drayton, Middlewich, Millom, Mold, Nantwich, *New Mills,* Northwich, Sandbach, Tarporley, Ulverston, Winsford and Over, Whitehaven, Workington, and Wrexham.
Grade C.—Ambleside, Bala, Bangor, Bowness-on-Windermere, Carnarvon, Colwyn Bay, Conway, Grasmere, Holyhead, Holywell, Kendal, Langdale, Llandudno, Llandudno Junction, Mostyn, Penrith, Prestatyn, Rhos, Rhyl, and Windermere.

MIDLAND COUNTIES :—
Grade A.—Alfreton, *Belper,* Bilston, *Birmingham, Blackheath, Chesterfield,* Coalville, Coventry, *Derby,* Heanor, Hinckley, *Ilkeston,* Kenilworth, *Leicester,* Lincoln, *Long Eaton, Loughborough, Mansfield, Nottingham, Nuneaton,* Oldbury, Ripley, *Sutton Coldfield, Sutton-in-Ashfield,* West Bromwich, Willenhall, and Wolverhampton.
Grade B.—Atherstone, Bewdley, Boston, Brierley Hill, Bromsgrove, Burton-on-Trent, Cannock, Coseley, *Darlaston,* Dudley, Gainsborough, Gornal, Grantham, Halesowen, Hednesford, Kidderminster, Knowle, Leamington, *Leek,* Lichfield, Louth, Malvern, Markey Harborough, *Matlock,* Melton Mowbray, *Newark,* Northampton, Oakengates, Old Hill, Peterborough, Redditch, Retford, Rugby, *Rugeley,* Sedgley, Shifnal, Shrewsbury, Skegness, Sleaford, Solihull, Southwell, *Stafford,* Stamford, Stourbridge, Stourport, Stratford-on-Avon, Swadlincote, Swanwick, Tamworth, *Walsall,* Warwick, *Wednesbury,* Wellington, Worcester, and Worksop.
Grade C.—Ashbourne, Bridgnorth, Church Stretton, Kettering, Ludlow, Newport, Oakham, Oundle, Raunds, Rushden, Spalding, Thrapston, Uttoxeter, Wellingborough, and Wirksworth.
Grade D.—Buckden, Eaton Socon, Huntingdon, St. Ives, and St. Neots.

EASTERN COUNTIES :—
Grade A.—Baldock, Bedford, Berkhamsted, Biggleswade, Braintree, Brentwood, Chelmsford, Cambridge, Colchester, Halstead, Hatfield, Harpenden, Hemel Hempstead, Henlow, Hertford, Hitchin, Hoddesdon, Ingatestone, Ipswich, Letchworth, Luton, Norwich, Ongar, St. Albans, Sandy, Sawbridgeworth, Stevenage, Stotfold, Ware, Welwyn, and Witham.
Grade B.—Aldeburgh, Ampthill, Attleborough, Aylsham, Braughing, Chatteris, Cromer, Dovercourt, Dunstable, Ely, Fakenham, Felixstowe, Gorleston, Halesworth, Harwich, King's Lynn, Leighton Buzzard, Leiston, Lowestoft, March, Much Hadham, Newmarket, North Walsham, Puckeridge, Renthem, Saxmundham, Southwold, Standon, Stowmarket, Wickham Market, Woodbridge, Wymondham, and Yarmouth.
Grade C.—Bungay, Coltishall, East Dereham, Royston, Saffron Walden, and Tring.

SOUTHERN COUNTIES :—
Grade A.—Abingdon, Addlestone, Amersham, Ascot, Ashford (Middlesex), Banbury, Beaconsfield, Bournemouth, Bracknell, Brighton, Byfleet, Chalfont, Chesham, Christchurch, Cremborne, Eastbourne, Eastleigh, Egham, Eton, Gerrard's Cross, Goring, Gosport, Gravesend, Guildford, Henley, Hove, Laleham, Maidenhead, Marlow, Northfleet, Oxford, Poole, Portsmouth, Reading, Southampton, Staines, Stanwell, Sunningdale, Sunninghill, Tilehurst, Tonbridge, Tunbridge Wells, Wallingford, Windsor, Winkfield, Woking, Wokingham, and Wycombe.
Grade B.—Arundel, Ashford (Kent), Aylesbury, Bagshot, Basingstoke, Bexhill, Bicester, Bletchley, Bognor, Bosham, Broadstairs, Brockenhurst, Buckingham, Burgess Hill, Camberley, Canterbury, Chatham, Chichester, Chipping Norton, Cranleigh, Deal, Dover, *Dorking,* Fareham, Faringdon, Faversham, Fenny Stratford, Folkestone, Gillingham, Godalming, Hailsham, Haslemere, Hastings, Havant, Herne Bay, Horsham, Hythe, Lambourn, Liphook, Littlehampton, Lymington, Lyndhurst, Maidstone, Margate, Midhurst, Milford, Milton Regis, Newbury, New Milton, Newport Pagnell, Oxted, Pangbourne, Petworth, Ramsgate, Redhill, Reigate, Rochester, Sandgate, St. Leonards, Sevenoaks, Sittingbourne, Strood, Stony Stratford, Stow-on-the-Wold, Ealmer, Wantage, Wendover, Westerham, Westgate, Whitstable, Winchester, Winslow, Witney, Wolverton, Woodstock, and Worthing.
Grade C.—Andover, Ardingley, Farnham, Godstone, Hawkhurst, Haywards Heath, Horley, Isle of Wight, Lingfield, Liss, Petersfield, Rye, Smallfield, Staplehurst, Steep, Turners Hill, and Uckfield.

SOUTH WESTERN COUNTIES :—
Grade I.—Bristol.
Grade II.—Plymouth * and Devonport.*
Grade III.—Dartmouth,* Exeter,* Newton Abbot, Paignton, Portishead, Stroud,† Taunton, and Torquay.
Grade IV.—Barnstaple, Povey Tracey, Bradford-on-Avon,* Bridgwater, Bridport,* Bruton, Burnham-on-Sea, Calne,* Castle Cary, Cheddar,* Cirencester,* Clevedon, Coleford,* Corsham,* Crewkerne,* Dawlish, Dorchester,* Exmouth, Fairford,* Frome,* Glastonbury, Lydney,* Melksham,* Midsomer Norton, Minehead,* Radstock, Shepton Mallet, Street, Swanage,* Teignmouth,* Tetbury,* Thornbury,* Totnes,† Trowbridge,* Wells, Westbury,* Weston-super-Mare, Weymouth,* and Yeovil.*
[N.B.—Bath, Cheltenham, Gloucester,* Hereford,* Swindon,* and Tewkesbury * :—craftsmen, 1s. 9d.; labourers, 1s. 4½d.]

SOUTH WALES AND MONMOUTHSHIRE :—
Grade A.—Aberavon, Aberdare, Abergavenny, Ammanford, Barry, Bridgend, Briton Ferry, Brynmawr, *Cardiff,* Chepstow, Duffryn Valley, Ebbw Vale, East Glamorganshire and Monmouthshire Valleys, Garw Valley, Gorseinon, Llanelly, Maesteg, Merthyr, Mountain Ash, Neath, Newport, Ogmore Vale, Pontardulais, Pontypool, Pontypridd, Porthcawl, Port Talbot, Rhondda and Rhymney Valleys, Sirhowy Valley, Swansea, and Tredegar.
Grade B.—Haverfordwest and Pembroke.
[N.B.—Brecon and Carmarthen :—Craftsmen, 1s. 10d.; labourers, 1s. 5½d.]

SCOTLAND :—
Grade A.—Airdrie, Alloa, Alva, Ayr, Bathgate, Bellshill, Bridge of Weir, Buckhaven, Burntisland, Clydebank, Coatbridge, Dumbarton, *Dundee,* Dunfermline, Edinburgh, *Falkirk,* Glasgow, *Gourock, Grangemouth, Greenock,* Haddington, Hamilton, Irvine, Kennoway, Kilmarnock, Kirkcaldy, *Larbert,* Leith, Leslie, Leven, Methil, Motherwell, Neilston, Newmains, Paisley, Pencaitland, Perth, *Port Glasgow,* Renfrew, *Stenhousemuir,* Stirling, Uddingston, Wemyss, Windygates, and Wishaw.
Grade B.—Arbroath and Peebles.
Grade C.—*Dumfries,* Galashiels, Hawick, and *Maxwelltown.*

* The rate for painters is 1d. per hour less than that shown for craftsmen in the above table.
† The rate for painters is ½d. per hour less than that shown for craftsmen in the above table.

* From "The Labour Gazette."

Wednesday, June 14, 1922. Vol. LV. No. 1432

THE ARCHITECTS' JOURNAL & Architectural Engineer

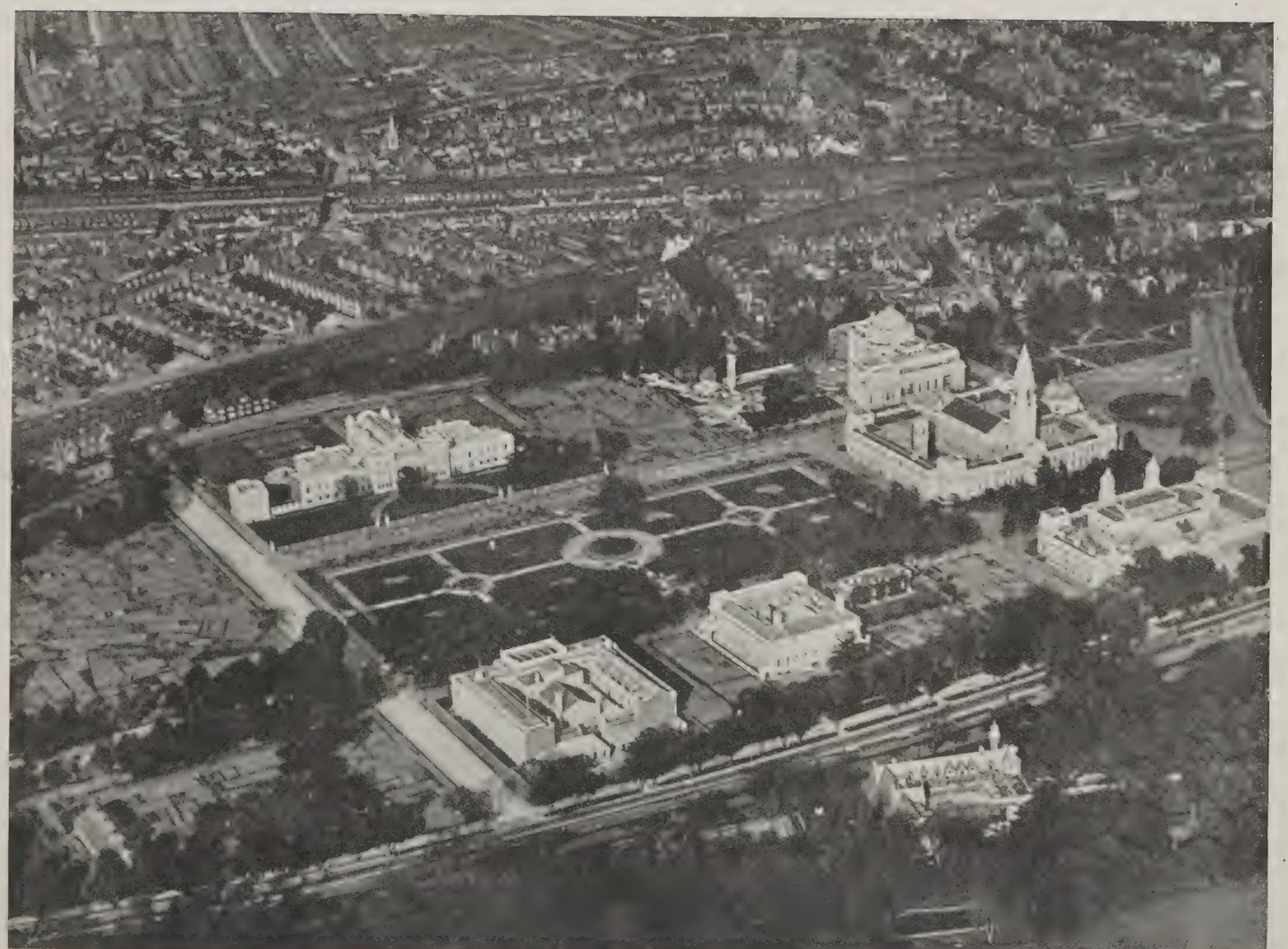
With which is incorporated "The Builders' Journal"

THE ASSEMBLY HALL, CARDIFF TECHNICAL COLLEGE.
IVOR JONES AND PERCY THOMAS, ARCHITECTS.

The Technical College was the headquarters of the R.I.B.A. Conference which was held last week in Cardiff. Papers were read and discussions took place in the Assembly Hall, which also contained an interesting display of drawings by students of Cardiff School of Architecture.

27-29 Tothill Street, Westminster, S.W.1.

Cathays Park, Cardiff



The fine group of modern buildings in Cathays Park, Cardiff, is here shown as it appears from the air. The wide-fronted building at the top left-hand corner of the formal space is University College. Top right is the still unfinished Welsh National Museum, with the City Hall (building with high tower) and Law Courts below. The small building to the left of the Law Courts is the Registry Office, close against which is the Glamorgan County Hall. To the left again is the Technical College, the headquarters of last week's Conference.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

Wednesday, June 14, 1922 Volume LV. No. 1432

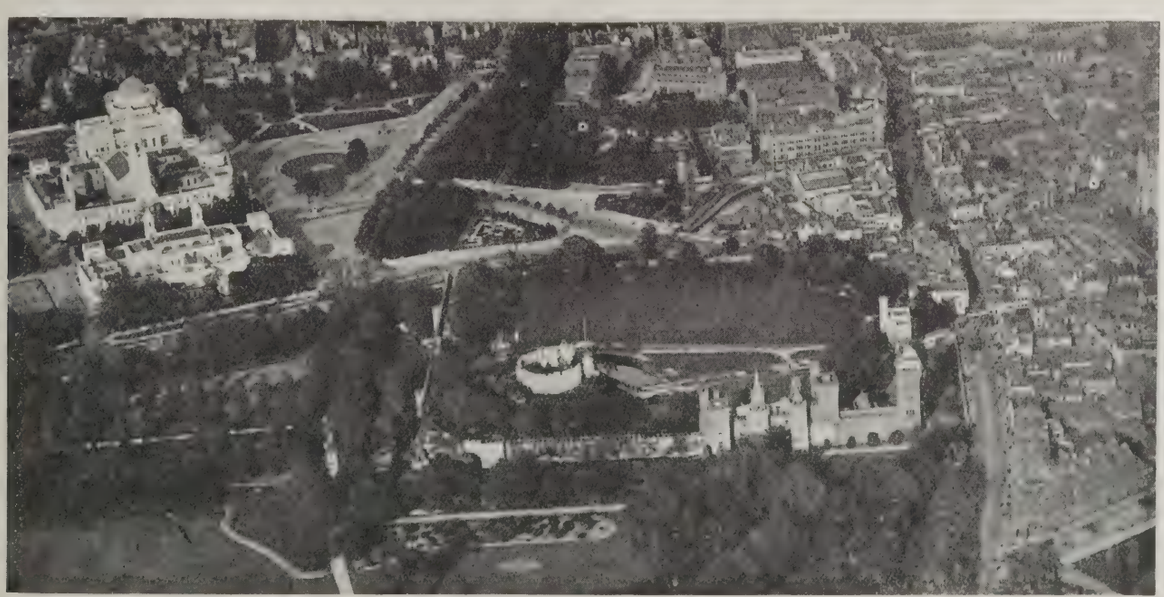
The Cardiff Conference

WHEN people hear that there has been a conference in such and such a place, there is really only one thing they want to know. They want to know whether it has been a success. Has the R.I.B.A. Conference at Cardiff been a success? As a matter of fact one would have to answer "Yes," whether it had succeeded or failed, out of courtesy to the R.I.B.A., to the South Wales Institute of Architects, and to the charming people in Cardiff who have shown hospitality to the members of a noble profession. Any architect, therefore, who is a little sceptical of these R.I.B.A. Conferences, and regards them as an excuse for the heads of the profession to take a short holiday in some pleasant spot during the hottest days of June, is not likely to be convinced of their value by pretty phrases. To the effusions of the pen, he will turn away with a slightly cynical smile. Nevertheless in this case he may take it as a fact that the conference has been not so much a success as a triumph. It has been triumphantly enjoyable and triumphantly useful, and has triumphantly justified its inception.

Last Thursday saw the assembly at different hotels of various well-known faces. There is something amusing and delightful in standing in a strange city and suddenly seeing the familiar features of Mr. William Woodward, or of Mr. Arthur Keen, or of Mr. Buckland. You feel that you want to fall upon their necks and express in broken accents the undying affection and devotion in which you hold them.

In the evening everyone assembled at the City Hall for the Lord Mayor's reception. This took the form of a concert by the Mountain Ash "Glyndwr" Concert Male Choir. The singing was magnificent, but the acoustics were bad. The Great Lanchester and Rickards Hall and Staircase naturally provided a topic of controversy for the architects. There were a lot of laymen and ladies present, too; and of the latter Miss Atkins, the first woman architectural student in Wales, presented, amidst loud applause, a bouquet to the Lady Mayoress.

On Friday morning Major Harry Barnes gave his address on "Unification and Registration," of which lack of time forbade discussion; and afterwards the whole party visited the City Hall and Law Courts, which are both in Cathays Park. One had opportunity to study Cathays Park pretty thoroughly, for the headquarters of the conference—the Technical College—stands on a flank of it. Many people here were strangers to Cardiff, and they were fairly staggered when they first came upon the park from the town. To pass from one of the usual crowded streets with trams and traffic and shops into a vast open space with trees a thousand years old standing before a great rampart of monumental architecture—the Law Courts, the City Hall in the centre, the National Museum of Wales on the other side—gave one much the sensation which is experienced on coming from the land suddenly and without warning upon the sea. There was the same breathless surprise and triumph, and the same exhilaration of discovery. It would not be true



AN AIR VIEW OF CARDIFF, SHOWING THE CASTLE AND ITS GROUNDS AND A GLIMPSE OF CATHAYS PARK

to say that Cathays Park is a perfect piece of architectural design. The lay-out came in for a lot of adverse criticism from the conference after the first admiration had faded; but, nevertheless, the general opinion of the company was that, despite some obvious weaknesses, Cathays Park is probably the finest thing of its kind that we have in the British Isles. What photos show of it can be seen in this issue; but naturally the whole scheme, and each individual unit of it, is much finer in reality that any photographic reproduction. This applies especially to the City Hall, which almost everybody who sees admires. Time and the elements have been kind to it. It is a fragile, delicate building with a strain of poetry in its constitution, and it is flung together almost as the thirteenth-century builders flung cathedrals together, with each detail essential to and in a just relation to the whole. The stone has been worn by the wind and rain to a milky whiteness which gives the building at a distance the appearance of silver or of silk. The interior is remarkable and, one would say, almost unique in respect of its lightness. There is not a dark corner in the whole building, and that is a great triumph.

THE NATIONAL MUSEUM OF WALES: THE ACTUAL BUILDING IN COURSE OF ERECTION.
SMITH AND BREWER, ARCHITECTS.

On Friday afternoon the party visited the Glamorgan County Hall and the National Museum of Wales, under the guidance of Mr. Vincent Harris and of Mr. Dunbar Smith, their respective architects. The museum is an extremely simple building, and is not finished, but there is a remarkable model of the completed design in the City Hall. This is illustrated below.

In the evening the conference banquet, an extremely gay and sparkling affair, was held at the Park Hotel. The President appeared for the first and last time at this banquet, and Major Barnes made a great speech.

Saturday brought Mr. Buckland's paper on "Civic Architecture and Advisory Art Commissions," and a visit to the Fire Station, where the fire brigade gave a most interesting display. Cardiff Castle and grounds were invaded in the afternoon. Mr. J. P. Grant, Lord Bute's architect, took the party over the interior, which is in the most extravagant Gothic manner of Burges. The library is undoubtedly a success, a most sumptuous room. The grounds recall Hyde Park with the turf turned into lawns and six times the number of trees. Peacocks wander at will amongst lawns and rhododendrons, and the view of the castle from the far end of the garden, with its lower portions hidden by great trees and its towers and spires rising in three masses, is most feudal and romantic.

THE NATIONAL MUSEUM OF WALES: A MODEL IN THE CITY HALL.

The smoking concert in the evening, where everybody got rather jolly, and the charabanc ride through glorious country to Tintern Abbey on Sunday, completed the activities of the conference.

To express the full importance of a few days spent in such activity it would be necessary to dwell upon the value of social intercourse; to depict how it enlarges the vision and realizes such professional unity as can be attained in no other way; and to indicate how it stimulates just that enthusiasm for their art which is so easily lost by architects in the wear and tear of practice. But these considerations have been repeated so often that they have grown rather hackneyed, though that does not dissipate their importance. They are spiritual considerations, however, and are not likely to convince people who do not already by experience realize their significance. If the Cardiff Conference had done no more than this, and formed merely a useful tie between members of many branches of the profession, it would have performed a worthy purpose, but it is possible that complaints would have been raised that it was unpractical. As a matter of fact, however, the conference has performed a still more important service.

The paper by Major Barnes on "Unification and Registration" has already been mentioned. It is printed in this issue of the JOURNAL and can be read by all; and in passing we would earnestly beg all architects to read it, because we cannot believe that, after grasping the points which Major Barnes has made in his own masterly way, any reader can fail to remain unconvinced. This paper is, as it were, the final pronouncement upon this much-debated subject. Major Barnes is not only an authority upon Unification and Registration, but as an M.P. he is also an authority upon the workings of the Mother of Parliaments. His address created a sensation in Cardiff, and met with unanimous and whole-hearted support. We believe that it should be as widely circulated as possible, because its judgments are unbiassed and its arguments unanswerable.

The other paper—Mr. Buc'land's paper on "Civic Architecture and Art Commissions"—is to have, if not more sweeping, at least more immediate results. The conference took his suggestions to its heart, and passed a unanimous vote in favour of his resolution. Various ideas were suggested, which will all be found in the discussion printed after the paper; of these, Mr. Ivor Jones's suggestion for Cardiff, that some of the experts present should send a letter to the South Wales Institute of Architects pointing out the excellent opportunities that existed in Cardiff for the setting up of an art commission, was immediately adopted. The resolution is to come before the R.I.B.A. at the earliest possible moment, but in the meantime various enthusiasts are studying ways and means of bringing before their city councils the desirability of setting up art commissions. It is felt on all hands that the important thing is to act, and to act immediately. This desire upon the part of all members of the conference to put ideas to some practical shape is, perhaps, its most encouraging and stimulating feature.

We cannot conclude without offering in the name of the profession thanks which are as hearty as they are sincere to the South Wales Institute of Architects in general, and to Mr. Percy Thomas and Mr. Ivor Jones in particular, for the magnificent way in which they entertained the R.I.B.A. in Cardiff. The plotting and planning of such a conference so that it shall run smoothly involves an amount of labour and forethought which does not appear on the surface. We happen to know, however, that for months a committee of devoted people has been wrestling with the various problems presented; and to their efforts is due the success which attended the conference. It was particularly noticeable about the Welsh Institute of Architects that they were all enthusiasts. In London for some reason there often appears to be a sort of latent apathy in the architectural atmosphere; not so in Cardiff. In Cardiff they are enthusiasts to a man; and it is this enthusiasm, this energy, this enterprise, which has made this year's conference so conspicuously productive, not only of idealistic suggestions, but of practical results.

Unification and Registration

By Major HARRY BARNES, M.P., F.R.I.B.A.

Cardiff: Morning Session, Friday, June 9. In the chair: Mr. Percy Thomas, O.B.E., President of the South Wales Institute of Architects, supported by Professor S. D. Adshead, Vice-President R.I.B.A., Mr. Arthur Keen, Hon. Sec. R.I.B.A., Mr. Ivor Jones, Hon. Sec. South Wales Institute of Architects, and Mr. Ian MacAlister, Secretary R.I.B.A.

MY paper this morning is a link in a sequence of events which may be taken to have begun at a special general meeting of The Royal Institute of British Architects on March 22, 1920. I was a member of a large representative committee then set up, and I think it was on my motion that the terms of reference of the committee were finally settled. But such has been my absolute impartiality on the question that I have never attended a meeting of the committee. I approach the question, therefore, with what is commonly called a virgin mind. From one aspect I may be considered as one of the rank and file who have to consider this matter, rather than as a member of the committee. Let us look first of all at the history of the thing. At that meeting in March 1920, proposals for the setting up of a large and representative committee to prepare a scheme of Unification were submitted to the general body, and the Council's proposals were passed. I have the terms of the resolutions, but sufficient to say here that the proposals were passed and a representative committee set up. That committee consisted of sixty-six persons. It consisted of the President of the R.I.B.A., two past Presidents, eight Fellows, seven Associates, and seven Licentiates of the Royal Institute of British Architects, twenty members of Allied Societies in the United Kingdom, four representatives of Allied Societies in the Dominions, two representatives of the Architectural Association, seven representatives of the Society of Architects, two representatives of the Architects' and Surveyors' Assistants' Professional Union, two representatives of the Official Architects' Association, one representative of the Ulster Society of Architects, and three representatives of architects unattached to any professional organizations, making a total representation of sixty-six, properly described as the most representative body of architects of the Empire that had ever come together.

At a meeting in July 1920, which was the first meeting following the approval of the general body, the terms of reference of the committee were the subject of discussion, and it was finally settled that the committee should be instructed to draft and submit alternate proposals for unification based respectively on absorption and federation. That was the problem that faced this committee at the outset. If we are going to get unification, how are we going to get it? Are we going to get it by absorbing all the different groups into one group in which they will lose their own particular identity and take on that of the largest group? Or are we going to have a federation in which the group will retain their identity and organization and be united by a more or less loose tie? That was the question put to the committee at the outset in July 1920.

On March 12, 1921, at a meeting of the full committee,

it was decided that the basis of unification should be the bringing of all the architects of the United Kingdom into the Royal Institute of British Architects. That was the decision come to after nearly a year's consideration by the full committee—the decision for absorption or amalgamation, whichever term you like to use, as against federation. It is important to remember that decision, because when we come to consider what I call the majority and minority memoranda, we shall find that the effect of the difference of these two is to bring us back to the original question which the committee after nearly a year's consideration decided in one direction. What has taken place between May, 1921, and the present time? The constitution of the committee was representative of a number of independent organizations, whose representatives had the right to decide matters inside their own organization, but had no right to prescribe for any other organization sitting on that body; so that having decided in May 1921 that amalgamation was the thing, the committee could go no further. It was bound to refer back to each of the bodies of which it was composed, the question as to how that amalgamation could be arrived at. References were thus made back to the Royal Institute of British Architects, to the Society of Architects, and I have no doubt to all the other societies.

This morning it would be preferable to confine ourselves to what has taken place at the Institute. What has taken place there? Any proposal for amalgamation was, of course, bound to affect the interests of each society amalgamated, and more than that, might affect unequally the interests of the different classes inside the society. Amalgamation may be conceived so far as the Institute is concerned as a different thing for the Fellows as compared with the Associates and a different thing for the Associates in comparison with the Licentiates, so that when this resolution of the Unification Committee came to the Council of the Royal Institute of British Architects, it was referred, as I think very properly, to the different classes in the Institute. It was submitted to a committee representing the Associates of the Royal Institute and a committee representing the Licentiates. They were asked to consider the question of amalgamation in the light of its effects on their classes, and so far as I understand, meetings have been taking place at which the matter has been discussed, but up to the present no reward has been received by the Council of the Institute.

The position of the Institute is this, that it is in possession of the knowledge that the committee set up to consider the question of Unification initiated by the Institute, has come to the conclusion that Unification will be best arrived at by bringing the architects of the United Kingdom into the Royal Institute of British Architects, and that that decision is under consideration by the Associates and Licentiates, but no decision has been yet reached. I wanted to bring that out clearly because there may be some misapprehension as to the exact position which we have reached at the present time. We have got no further than the realm of Principle, we have not entered the realm of Detail at all. We may have got past the Scylla of Principle only to founder on the Charybdis of Detail. It is not advisable at the moment to confuse the issue which does really present itself to us now by being under the impression that we have any detailed method of effecting Unification. We have got, perhaps, just a little further than the question of principle.

In May of this year, at a meeting of the committee which I understand was attended by thirty-two members (and if I had been there would have been composed of just 50 per cent. of the committee), a statement on Unification was submitted to be issued to the members of the Institute. From that statement a certain number of members of the committee dissented, and the result is that we have two statements before us—a majority statement and a minority statement. I want to ask you just for a few moments this morning to apply your minds as judicially as possible to those two statements and see where they lead us. I think it is important to do that because this question is in a different position to what it was before March 1920. We can never get back to that. We can never escape the influence of these last two years of discussion and negotiation.

MAJOR BARNES, M.P.

The majority statement is to the effect that the interests of the profession will be best served by the grouping into an organic whole under the name of the Royal Institute of the entire profession. The minority statement, signed by men of high reputation and long standing in the profession —men whose views deserve to be, and must be, taken into account—puts forward a difference of opinion between these men and those who form the majority. What is the issue between the two bodies? I have read the two statements very carefully, and I have read them first of all to find out what are the points of agreement, because in any negotiations it is much more important to ascertain how far you agree than how far you differ. It may very well be that when you have ascertained the extent of your agreement you may find it possible to extend that agreement to such an extent as to wash out your differences. In what do they agree? They both want Unification. The majority say "Unification is desirable"; the minority say "We are strongly in favour of Unification." There is no issue on that point, and they are both in favour of Registration. What, then, is the difference between the majority and the minority on the committee? I say it is this: the majority and the minority both want to get to the same goal, but the majority say "Let's get to Registration by way of Unification," while the minority say "We will get Unification by way of Registration." The majority say "Unify first and you will then get Registration," and the minority say "Register first, and then you will unify." That is the issue.

Are the majority right in saying that we will get Registration by way of preliminary Unification, or are the minority right in saying that we can go on to Registration without any such preliminary steps, and that, having got Registration, then Unification will follow? There is nothing very abstruse about the thing at all. It is just a question

of commonsense opinion upon which is the more practical of two courses. It is from that point of view we should consider it.

We want registration. What is registration? Registration is entering upon the register of men who have fulfilled certain conditions. That involves two things. It involves stating the conditions, and it involves setting out an authority which will decide whether the conditions have been fulfilled or not. Those are the two essential things for registration. You must agree on the conditions under which men shall go on the register, and you must set out an authority which will say whether those conditions have been fulfilled or not. If this was a matter which could be dealt with inside the profession, that would be one thing, but it is not. You cannot settle the question of registration inside the profession. You must go outside. The question of registration is not going to be settled by men who are in the profession, but by men who are in a much humbler place—in Parliament. You have to go to the House of Commons, and afterwards to the House of Lords, and you have to get a body of men who are not engaged in the profession, who, so far as I am able to judge, are not particularly interested in the profession, to lay down these conditions and set up this authority.

The House of Commons lives by taking decisions, but it hates to do so all the time. Every time a member of the House hears the Division Bell he shudders, because he knows that for all these things he may be brought to judgment, and may have to give an answer as to why he voted this way or voted that way. All members of the House of Commons love to be led, and in the main questions they have to vote upon they are led. There are clear issues. You just look to see where your whips are, and there you go. But there come up from time to time questions such as this registration question, which are not so simply settled. They have not been raised to the dignity of great political issues, and, therefore, members of the House of Commons are never likely to get a clear lead from their whips. But the House of Commons if it cannot get a lead from inside likes to get a lead from outside. It does not like to have a thing thrown before it and told "You must make up your mind on that without any lead at all." What the House of Commons likes to be told is "This is an agreed Bill." That means that those who are interested in the Bill have come together and have agreed that this is the best measure that can be brought forward. The House of Commons has then only to consider the interests of the public. When a measure comes before the House in that form it is likely to get through, but when it appears in any form in which the House of Commons has to decide between a number of varying claims by people immediately concerned in the measure, it is likely to turn the whole thing down and say 'Make up your minds what you want before you come before us. You don't expect us to make up your minds for you."

That is a statement of the case which would be generally admitted by anybody who knows the working of Parliament; and having that point in view, I think we must examine the majority and the minority statements to ascertain which are most likely to bring registration before the House of Commons in a form likely to secure the assent of Parliament. What do the majority propose? They propose to precede their approach to Parliament by first coming to an agreement with the various bodies of architects in the country. They propose to agree with their brother on the way before bringing him to the judgment seat. That is a good scriptural line to take. They say, 'Let us endeavour to get unto such a position that when we go before Parliament with the Registration Bill we can say these are the conditions upon which we think a man alone shall be allowed to come on the register. These are the conditions we want in the Act, and this is the kind of authority we want setting up to see that the conditions are fulfilled. As a profession we are agreed on the conditions and the authority. What we ask you to do is to give them statutory force.'"

That is the position that the majority take up; but the minority take a different view. They say, "There is no need to do that." They argue that the arrangement as proposed by the majority raises all kinds of very difficult questions; that on the question of registration there is already agreement with us; they say that the Society of Architects is committed to it, that it is the basis that has kept it going for the last forty years; they say that the Official Architects Association is desirous of working with the Institute in every way, and that the Architectural Association is allied to the Institute and the Official Architects' Association; that being so, they say, "We are a united profession on this point. The road is quite clear. Let us go ahead, we do not need any closer relationship. The only relationship we want is the relationship of registration, otherwise we desire to be as we are, and that is all that is required."

If I may use an illustration, both the majority and the minority contemplate matrimony in the sense of registration. The majority say, "Let us be engaged first and then we will proceed to the altar with the experience of our engagement and with a real desire to live happily together afterwards." The minority say, "No, it is perfectly true that we have an interest which is sufficiently common to induce us to enter into the marriage state, but it is purely a marriage of convenience. Let that be clearly understood. No preliminary engagement at all, and we part at the church door." There are grounds upon which a clergyman may refuse to perform the marriage ceremony. I do not know if he can go quite so far as to consider the general feeling between the parties, but after all the House of Commons, which will play the part of clergyman, is likely to be influenced by the relationship between the parties.

Let us take the best view, which is that you can get agreement on the matter. Doubtless agreement can be brought about. Suppose then that it has been found possible to bring agreement about. I put this question to the minority. Is it likely that under the relationship which they desire to maintain the conditions under which men would be put upon the register would be the conditions on which the Institute acting by itself, and if it were the sole body, would lay down? Are they not in the nature of things bound to be something less? Here you have different bodies who at the present time lay down their own conditions for entrance into their own bodies; they have come together and agree on a common set of conditions. Is any party likely to get its own way? Is not the result likely to be a kind of compromise in which the conditions will be something less than the conditions which would be laid down if the Institute was dealing solely with the matter? If that is true about the conditions, is it not also true about the authority? If there is to be any grouping and if the various architectural bodies are to remain independent, is it believable that they would consent to the authority which would determine entrance to the register being in one of the societies? Is it likely that under any form of agreement the Society of Architects would consent to the Royal Institute being the body to decide who would go on the register or not? As architects we are always negotiating with someone—with clients or with contractors—and always in negotiations there has to be some give and take. I submit with confidence that if the minority is right that agreement can be obtained, then the inevitable result must be agreement on conditions which would be something less than the Institute itself would prescribe, and also agreement on some authority which would not be the Institute, but which must be some other authority upon which no doubt the Institute would have a preponderance of representation, but some authority other than itself. If the minority are right, and agreement can be obtained, and you can get your Registration Bill, then that Registration Bill will set up some authority which is not the Institute, but is a federated authority. In other words, you will be back in the position in which the committee found itself before May 1921, when they were con-

sidering the question whether they should be one body arrived at by amalgamation, or a federated body. It decided that there must be one body, and that body the Institute. The effect of the policy advocated by the minority would be to set up a statutory body governing entrance to the architectural profession which would not be the Institute.

I remember when I used to read Ouida reading in one of her books a statement that of two people who love, one always loves the least. And of two bodies one must always be the lesser. You cannot maintain equality. And I venture to predicate that if you get a measure of registration through the Houses of Parliament in which an authority not the Institute was set up and had the power of opening and shutting the doors of the profession, that authority is in the course of time bound to become the greater power, and the Institute to lose prestige and position.

What you have to decide is to whom are the keys of heaven to be given. Who is to be St. Peter? Is the Institute to be, or is it to be some other authority to be set up by Parliament? That appears to me to be the logical result of following the course laid down by the minority even if that course should be successful.

But would it be successful? Could agreement be got? I venture to doubt it. What we should find would be that architects would come before the House of Commons on the Registration Bill in the same position as the nurses two years ago. The nurses were not agreed, and it led to a fierce conflict in the House of Commons between the two bodies which represented the nurses. Let me read what the Minister of Health said when the Bill was turned down. "The Government arranged for meetings with the various parties who are interested in this Bill, and have had conferences with them with the view of discovering whether a sufficient measure of agreement could be reached by which we could obtain a Bill. I am sorry to say that the result of these conferences has convinced me against my will that such an agreement is not obtainable. I think it arises from the fact that those who are interested were not by any means agreed as to what was implied by registration. In some quarters it was thought that the authority responsible for registration should deal with the conditions of training—not only the standard arrived at, but the conditions and conduct of training. Another difficulty is that it appears to be thought by some that the body responsible for the register should control the conditions of employment. I found that the difference on these and kindred subjects were so great that it was quite out of the question to bring about an agreement. The controversy appears to have been unfortunately mixed up with personal and sectional issues which cannot be reconciled."

It is a dangerous thing. Just as the Bill promoted by different bodies of nurses who had not come to an agreement failed to pass the House of Commons, so a Bill promoted by different bodies of architects not in agreement would fail to pass the House. So that if you do agree you get something less than the Institute; and if you do not agree, you get nothing at all.

The minority point out the position in which the Institute stands at the present moment—its influence, its prestige, and the fact that it has been built up really on a basis of exclusion—of excluding from the Institute men who were not prepared to undergo the examination and obtain the qualifications demanded by the Institute, and they draw attention to the fact that a great number of men have spent time and money to pass these examinations and secure the qualifications, and that the effect of the majority proposals is to deprive these men of the advantage which the possession of these qualifications gives them. That is a strong point. I am not a London architect, I am a provincial man, and I know what it means to provincial men to secure these qualifications and the advantage it gives them in their work. But coming back to registration, the minority say that were the present basis of the Institute preserved, it would in the course of time bring everybody into the Institute, and unification would thus be procured by a national process. "If you unify before you register," they say, "you deprive all these men at one stroke of the advantages which their qualifications give them." But does not the minority realize that under *registration* you cannot differentiate between the men who have the qualifications and those who have not? We have seen the nurses and the dentists come for registration. When the dentists came they endeavoured to differentiate on the register between men properly qualified and the men who had no such qualifications. They said, "Give us a differential register. We want all inside, but not on the same terms." That might almost be used in the same words for the architects' profession. "The object of the Bill is to establish the dental profession on a sound and permanent footing. For that purpose it is proposed to bring in a large number of persons who, in the eyes of the law, have not been qualified to practise dentistry hitherto. It is a very large and generous action on the part of those who have already qualified to agree to this extension. They have given hostages to fortune, and have undergone long years in training to follow out the course established under the law, and to get put on to the qualified register of the Act of 1878. These men have spent time and money to do that which the State considered the minimum necessary. They admit now, in the national public interest, that the great thing is to secure control and check over those who are not so qualified. They object, however, to the idea that men who have gone through the training in the theory and practice of dentistry should be put on the register on equal terms with those who are not so qualified, so that in the eyes of most men and women there would be no difference between them. The proposal is that those who don't take the examination are to be shown on the special list. We want to show readily and clearly those who are and those who are not properly qualified." And what did the Government do? The Minister of Health refused to accept the proposal in these words: "The Government cannot accept the amendment. I have some sympathy with the point of view put forward that dentists who have pursued long and careful scientific study, and who have thoroughly qualified themselves in every direction for their profession may feel that the admission of a large number of men to the same register who have not undergone the same training as they have is a form of dilution. But the whole scheme and purpose of this Bill is this: At the present time anybody can set himself up as a practising dentist without any qualifications, restraint, or discipline. The dental profession, i.e., the people who are on the register of 1878, are the people who have complained of this state of things. They are the people who want this state of things to come to an end. They are the people who have asked that the unregistered dentist should be brought under professional discipline. As this amendment stands you are not going to put these people on the register. You are going to say: 'We are now going to have a separate list of sheep and goats.' I don't know whether the unregistered dentist would not be in a better position in the present condition of things because nowadays there is no such list of sheep and goats, although there may be a list of sheep. You cannot have it both ways. It will be a great future advantage to get an entirely unregulated dental practice prohibited; and if, at the eleventh hour, when we have got most of the various interests into line, we should break up again and throw the whole thing back into the melting pot it would be a great pity."

If you are going to have registration Parliament will not agree to a special list of men who have different qualifications, and therefore I say to those who say that the unification proposal of the majority would tend to obliterate qualifications, that registration would do the same thing. There are difficulties in both ways, but in my own view, and I think the view probably of the bulk of the profession, the course which the majority proposes to take is the wiser course. They propose to break the back of their difficulties outside the House, and not to attempt to do it inside the House. If you cannot get unification outside the House,

Some Personalities at the Cardiff Conference

Portrayed by H. DE C.

you cannot get unification after going there. You must take the risk. That there is a risk the minority points out. It is the risk of diminishing the prestige and position of the Institute, but the risk which will be run by the minority would be that of bringing into existence an authority which in time would be the superior to the Institute. I cannot help thinking that the minority in their view of the situation have something of that cautious and conciliatory spirit which was exhibited by the mother to whom the question was put, "Mother, may I go out to bathe?" and the answer came,

> "Yes, my darling daughter;
> Hang your clothes on the gooseberry bush,
> But don't go near the water."

(Laughter and continued applause greeted the close of Major Barnes's address.)

The Chairman: We may not agree with Unification and Registration, but there is one thing we can agree on, and that is on how very ably Major Barnes has presented the case before us this morning. I am sorry that time does not admit of a discussion of Major Barnes's paper, which would have enabled us to hear both sides of the case. The case could not have been put fairer in any discussion than it has been put by this paper. It remains, therefore, for me to express to Major Barnes the thanks of the Royal Institute for the excellent paper put before us this morning. I am sure all the members have thoroughly agreed with him and appreciated the paper. (Loud applause.)

Civic Architecture and Art Commissions

By HERBERT T. BUCKLAND, President of the Birmingham A.A.

Read on Saturday, June 10; Mr. Percy Thomas, President of the South Wales Institute of Architects, in the Chair.

I HOPE I shall not be regarded as laying claim to any special knowledge upon the subject upon which I am about to speak, or as holding any brief to advocate a policy on the subject. Many, I feel sure, have been devoting far more attention and consideration to the matter than I have done, and could far more worthily present a case. That I should have been invited to address you upon the matter at all is due, I imagine, to the fact that I was impertinent enough to throw out a few suggestions at the Conference at Liverpool last year, which were received with so much gratifying appreciation that it became evident then, and in subsequent correspondence, there was a widespread interest in the subject, which was only awaiting an opportunity for wider discussion; and when I was honoured by an invitation from the organizers of this Conference to initiate such a discussion by giving an address, I willingly accepted, in the hope that I might be able to further a project of which I have always been an ardent advocate.

At the outset, it will, perhaps, be well to define what we mean by the terms "Civic Architecture" and "Art Commissions." The former scarcely needs any definition; one naturally assumes that it means the architecture of our cities which comes under the control of or is erected by civic authorities out of public funds. "Art Commissions" in countries where such exist are committees composed of persons of taste and others in authority, to whom are referred matters of art, architecture, and civic adornment, and in most cases civic development.

Among the questions which might be asked are: (1) Why does the need for such commissions arise? (2) How are we to know that the working of such commissions would be of benefit to the community?

A reply to the first could be given by a thoughtful observer in any city in our country, and to the second an enquiry as to the results achieved where such commissions have existed for a number of years would, I think, afford sufficient evidence.

Although our "thoughtful observer" might be able, as a result of his observations, to report that there certainly appeared to be a need for such a commission to guard against the haphazard development which characterizes most of our cities, it remains, I think, for us to consider why this state of things exists.

It is a little unfortunate that, in spite of excellent intentions, civic authorities themselves are frequently the greatest hinderers of a proper civic development and adornment. This is due, I think, to several causes; among them probably the first is a mistaken idea with regard to economy, coupled with a praiseworthy desire to exercise the authority which is vested in councillors by the electors. The second a deep-seated faith in his own convictions which exists in the mind of the city councillor, and a belief that taste is a matter of opinion. The third a commendable but frequently exaggerated idea of his own capabilities and those of the city officials.

I suggest that the ideas with regard to economy are "*mistaken*," because in the majority of cases the city engineer is made the chief adviser in matters of expenditure upon public works, whatever their character. This function should doubtless appertain to him where the work is such as comes within the bounds of his experience, as, for example, road making, drainage, street improvements, lighting, etc.; but when it becomes a question of civic improvements it certainly appears to be poor economy to give him jurisdiction over expenditure upon questions of new buildings and the adornment of the city, which he is not qualified by training or experience to deal with, even though by so doing a saving in professional fees is effected.

When advancing this contention one is frequently met by the retort that the city engineer is a qualified architect, sometimes an Associate or Fellow of the Institute. I think the reply to this is that any man whose time is fully engaged upon the routine duties of a city engineer could not possibly devote sufficient time to the development of his artistic faculties to justify a dependence upon his opinion in matters of art.

The praiseworthy desire of a city councillor to exercise the authority vested in him by the electors is a little difficult to combat when making suggestions that advice from others than councillors and officials should be sought, as one is always faced by the argument that the city councillor is responsible to the ratepayer, and that it would not be fair to the electors to let anyone else dictate as to what should be done upon matters in which public expenditure is involved. Behind this argument we find him taking refuge in order to enable himself to exercise that taste which he treasures as a matter of opinion, and conceal his secret satisfaction and faith in his own capabilities and those of the city officials with whom he is in daily touch.

If this is a fair statement of the case, and you are in agreement with me as to the desirability of forming art commissions to exercise some sort of jurisdiction over such matters as I have outlined, it must be apparent at the outset that we shall have to combat very deep-seated convictions founded upon a practice and point of view which it will be very difficult to combat; but of this I propose to speak later.

In America there appears to be a keener public interest in civic development than is evident in England, and perhaps other countries; and through the good offices of our

Secretary, Mr. MacAlister, and the courtesy of various organizations in America, which I most gratefully acknowledge, I have been furnished with a number of very interesting documents, including reports of the working of various art commissions, suggestions as to their organization and scope, and copies of the laws relating to art commissions in no fewer than twenty of the largest cities in America, from which it is evident that a quarter of a century ago the need or desirability of forming such organizations had for some time been felt, with the result that in 1898 laws were passed in the City of Boston establishing an Art Department, under the charge of five art commissioners, who were appointed as follows :—

One from a list of three persons selected by the trustees of the Museum of Fine Arts; one from a list of three persons selected by the trustees of the Boston Public Library; one from a list of three persons selected by the trustees of the Massachusetts Institute of Technology; one from a list of three persons selected by the Boston Art Club; and one from a list of three persons selected by the Boston Society of Architects.

In these laws it was enacted that :—

No work of art shall become the property of the said city by purchase, gift, or otherwise unless such work of art, or the design for the same, together with a statement of the proposed location of the same shall first have been submitted to and approved by said board acting by a majority of all its members; nor shall any work of art, until so approved, be erected or placed in, over or upon, or allowed to extend in, over or upon any street, avenue, square, place, common, park, municipal building, or other public place under the control of said city or any department or officer thereof. No existing work of art in the possession of said city shall be removed, relocated, or altered in any way that may be ordered by a vote passed and approved, in writing, by all the members of said commission, and also approved by the mayor.

When so requested by the mayor or the city council, said commission may, in its discretion, act in a similar capacity with similar powers, in respect to the design of any municipal building, bridge, approach, lamp, ornamental gate or fence, or other structure erected, or to be erected, upon land belonging to the city, and in respect to any arch, bridge, structure, or approach which is the property of any corporation or individual, and extends in, over or upon any street, avenue, highway, park, or public place; but this section shall not apply to structures authorized to be erected under the provisions of chapter five hundred of the Acts of the year eighteen hundred and ninety-seven, and shall not be construed as intended to impair the power of the board of park commissioners of said city to refuse its consent to the erection or acceptance of any public monument or memorial, or other work of art of any sort, within any park or public place in said city under the jurisdiction of said board.

In 1899 there was created in Chicago a commission known as the Art Commission of the City of Chicago, the said commission to proceed and act in accordance with the provisions of an Act of the legislature entitled, "an Act to provide for the creation of art commissions in cities and to define their powers." This was approved on April 24, 1899; but even earlier than these was the appointment of a "Commission of Sculpture" for Connecticut State Capitol, the laws of which are dated 1887.

The laws governing the formation of art commissions in the twenty cities already referred to are very similar in general scope, and only vary in matters of detail. The best summary of the considered views upon the subject is contained in a report of a committee appointed at a conference of members of art commissions which was held in New York in May 1913, upon the invitation of the Art Commission of the City of New York, which was attended by members of nine city, two state, one national art commission and delegates from seven cities. At this conference the proper functions and powers of art commissions were discussed and the formation of further commissions in the future considered. The desirability of the establishment of commissioms in both cities and states was strongly emphasized, and certain general conclusions were reached as to the proper form of organization and the functions of such commissions. A general agreement was arrived at upon the following points :—

1. The desirability of including the mayor, or, in case of a state commission, the governor, as a member of the board;

2. The desirability of including in the commission both professional men — architects (landscape architects), painters, and sculptors, and laymen;

3. The desirability of limiting the commission to a comparatively small number—say five to nine members;

4. The importance of conferring upon city commissions the veto power, though it was felt that in the case of state commissions the power should be advisory only;

5. The necessity of adapting the form of organization to the local conditions existing in each case, and the importance of subordinating matters of form and detail to the accomplishment of the main purpose of effecting the establishment of a commission, where none exists, however limited its powers.

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At the conclusion of the conference the committee already referred to were appointed to draft forms of statutes providing for establishing city and state art commissions and defining their powers, as suggestions, and as a possible means of furthering the organization of such bodies, and the following drafts were ultimately submitted :

Form A.—An Act to establish an art commission in a city of the first class.

Form B.—An Act to establish an art commission in a city of the second class.

Form C.—An Act to establish a state art commission.

As the considered opinion of a number of men, architects, artists and laymen experienced in the working of art commissions, the three forms referred to must be regarded as of great weight.

I will read Form A, which is described as an Act to establish an art commission in the city of ——— :—

Section 1.—There shall be an Art Commission in and for the city of ——, composed of the mayor, *ex-officio*, and six others appointed by him within thirty days after this Act takes effect, of whom three shall be persons engaged in the practice of the fine arts (one of whom shall be a painter, one a sculptor, and one an architect). Three of such members shall be (or may be) appointed from a list or lists of painters, sculptors, and archi-

tects, nominated by the governing board of the Chapter of the American Institute of Architects existing in said city (or other organization representing the fine arts); one of such members shall be (or may be) appointed by the mayor from a list of three persons nominated by the governing body of the Chamber of Commerce in said city, one from a list of three persons nominated by the governing board of the Public Library of said city, and one from a list of three persons nominated by the governing board of (insert the name of a college or university situated in the city); and whenever the term of a member of said commission so appointed expires, or a vacancy occurs, the mayor shall (or may) appoint his successor from a list of persons nominated by the body making the original nomination. The members of the commission who shall be appointed by the mayor in the first instance shall choose by lot terms of office for one, two, and three years, and their successors shall be appointed for terms of three years, except appointments to fill vacancies, which shall be for the unexpired term. In case any of the organizations entitled to make nominations as hereinbefore provided shall fail to make such nominations within sixty days after the expiration of a term or the occurrence of a vacancy, the mayor shall appoint a member to fill the vacancy upon his own nomination. In all matters pertaining to work under the special charge of a department, bureau, or commission of the city, the head of such department, bureau, or commission shall also act as a member of the Art Commission *ex-officio*, in reference to such work.

Section 2.—The members of the commission shall serve without compensation as such, and from their own members shall elect a president and vice-president, whose terms of office shall be for one year and until their successors are elected and have qualified. The commission shall have power to adopt its own rules of procedure and to prescribe regulations for the submission of all matters within its jurisdiction. Four commissioners shall constitute a quorum.

Section 3.—The commission shall have power to employ a secretary and such clerks, stenographers, and other assistants as it may require, and to fix their salaries. All employees of the commission shall be exempt from the provisions of the Civil Service Act. Suitable offices shall be provided for the commission by the Common Council. The expenses of the commission shall be paid by the city, and the amount of the same shall be fixed annually by the Common Council.

Section 4.—Hereafter no work of art shall become the property of said city, by purchase, gift or otherwise, unless such work of art or a design of the same, together with the proposed location of such work of art, shall first have been submitted to and approved by the commission; nor shall any work of art until so approved be contracted for, erected, or placed in or upon, or allowed to extend over or upon, any street, avenue, square, park, public building, or other property belonging to the city. The commission may, when they deem proper, also require a model of the proposed work of art to be submitted.

Section 5.—The commission shall act in a similar capacity with similar powers (unless its approval shall in any instance be dispensed with by vote of the Common Council) in respect to the designs of buildings, bridges, approaches, gates, fences, lamps, or other structures erected or to be erected upon land belonging to the city and in respect to the lines, grades, plotting, and designs of public parks, streets, avenues, ways, and grounds, and in respect to arches, bridges, structures, and approaches which are the property of any corporation or individual, and which shall extend upon any street, avenue, highway, park, or property belonging to the city.

Section 6.—No existing work of art owned by the city shall be removed, relocated, or altered in any way without the like approval of the commission; but in case the immediate removal or re-location of any existing work of art shall be deemed necessary by the mayor, the commission shall within ten days after notice from him approve or disapprove of said removal or re-location, and in case of their failure to so act within such time after the receipt of such notice, they shall be deemed to have approved the same.

Section 7.—If the commission shall fail to decide on any matter submitted to it, except a submission involving the immediate removal or re-location of a work of art, within sixty days after the submission thereof, they shall be deemed to have approved the same.

Section 8.—The term "work of art" as used in this Act shall apply to and include all paintings, mural decorations, stained glass, statues, bas-reliefs, tablets, sculptures, monuments, fountains, arches or other structures of a permanent character intended for ornament or commemoration.

Section 9.—Any member of the commission who shall be employed by the city to execute a work of art or structure of any kind requiring the approval of the commission, or who shall take part in a competition for such work of art or structure, shall be disqualified from voting thereon; and the commission may in its discretion invite an expert adviser to give his opinion as to such work of art or structure.

Section 10.—The commission shall, on or before the first Monday of March in each year, make a written report to the Mayor of its proceedings during the preceding calendar year.

Section 11.—The commission shall be the custodian of all works of art owned by the city, and shall have sole charge of the care and preservation thereof.

Section 12.—This Act shall take effect immediately.

NOTE.—The Chamber of Commerce, Public Library, and the other institutions named are only suggested as indicating the character of institutions which may appropriately be entrusted with the right of nomination, subject to such substitutions as local conditions may render desirable.

As an evidence of the appreciation with which the work of these commissions is regarded, I should like to quote from a letter written by President Wilson in March 1921 to Mr. Wm. Mitchell Kendall, the architect, upon his resignation from the National Commission of Fine Arts, after four years' service :—

It certainly is a cause for satisfaction on the part of the Government that a means has been found to secure the advice of men, like yourself, of taste and training in matters of art, so that permanently agreeable qualities may be imparted to those Government works which make an appeal to the public eye.

It is a further satisfaction to know that the Commission of Fine Arts, during the ten years of its existence, has maintained the spirit of continuing service; and that even after the official terms of the members have expired they still meet with the Commission when called upon to discuss matters of high importance.

The commission referred to was created by an Act of Congress approved May 17 1910. Its members, appointed by the President for a term of four years, included the following well-known names: Herbert Adams, sculptor; John Russell Pope, architect (vice-chairman); James J. Greenleaf, landscape architect; J. Alden Weir, painter; Charles A. Platt, architect.

The ninth report issued by this commission in June 1921 is a monumental document dealing with the progress made during twenty years.

The best evidence as to whether the formation of art commissions works for good, so far as civic art, architecture and development is concerned, is to be found in the cities where such commissions exist. I have not been to America so I cannot judge from personal experience; but from all one hears from those who have, I think it may be safely said that architecture and the allied arts hold there a position in the public mind which is not the case in England. If this is so, how far is it due to the operations of art commissions, and if it can be shown to be due to such operations, is it not time England took steps in the same direction.

I hope there are many present who will support my view that the time is ripe to take action. If so, it only remains to consider what action we should take. The first idea which occurs to one is to approach city councils and endeavour to enlist their interest and get them to adopt some local legislation to effect the purpose. This has been contemplated in one or two cases, but I think it will be recognized upon careful consideration that the results achieved are likely to depend very largely upon the energy of local advocates, which in some cases will be practically negligible. I therefore venture to suggest that the proper course to pursue is to approach the Government and impress upon it —or shall I say convince it ?—of the need for legislation, and ensue it. I therefore propose, with the consent of the chairman, after the discussion which I hope will follow, to move the following resolution :—

"That this meeting requests the Council of the Royal Institute of British Architects to take steps in the proper quarter to represent to the Government the advisability

of passing legislation for the creation of art commissions throughout the country, to act in a similar capacity to those already existing in America."

Discussion.

Major H. C. Corlette : I do not know whether Mr. Buckland is aware that in England we are not quite so sleepy in that respect as he might suppose, because in Kensington we already have not what we call an Art Commission, but there is a Civic Art Committee, and that Civic Art Committee has been in existence for a short time. It is to quite a large extent alive to the responsibility which might and ought to be put upon such a committee in a place like the Royal Borough of Kensington. It has the Mayor as its chairman, and we are fortunate in having in Kensington quite a number of members of the Royal Academy and others who are also on this Civic Art Committee; so that Mr. Buckland may be pleased to hear, if he has not already learned, that a start has been made in the formation of Civic Art Committees in this country. We all know as architects that taste is not a matter we are born with. I used to enjoy certain things when I was younger than I am now, and when I look at them at the present time I wonder how it was that I ever thought they were worth admiring. If that is possible, if we do move from position to position in matters of taste, then surely it is possible to improve the taste of our rulers and governors of municipalities as well as, perhaps, those in a larger sphere. I should like to refer to a rather interesting article which I found in "The Morning Post" of yesterday on the subject of Art in Oxford. The Slade Professor of Fine Art in Oxford suggests that one of the objects of Oxford in dealing with the question of the Fine Arts should be to broaden the outlook of the men of liberal education on the part which Art should play in public life. He then goes on to discuss the position of Art in Oxford, and sums up by saying that if by the inception of some such course as has been mentioned an increasing number of men who will hold responsible positions in the life of the nation leave the University with a broadened view of Art, something may have been achieved with regard to broadening the taste towards civic monuments, and a great step taken in the formation of character. I think it is a great thing that we should find Professor Hine supporting our own convictions in this direction.

Professor S. D. Adshead : We are here in Cardiff, which we have all known for many years as the city which presented us with one of the great municipal centres of the country, and I think we are all agreed that the collection of buildings is not disappointing, and that we can safely say that you have here in Cardiff a civic centre and an intellectual and administrative centre such as is not to be found anywhere else in the British Isles. I have seen most of them myself, and I can clearly say that I have seen nothing, on this side of the Channel at any rate, which in any way approaches the buildings you have here. I want to say here that I am awfully glad that Mr. Buckland with his characteristic courage has driven the nail home. He has spoken to the point. You have this wonderful collection of buildings, and you have also, I do not know whether it is by accident or to what it is due, but you have also one or two magnificent avenues. I know nothing like that magnificent vista of trees and avenue that you call King Edward Avenue. And in between this you have a most amateurish collection of strange, undeveloped, contorted, and confused buildings, and it is unaccountable how this fine collection could come together amid such confusion. What is the reason ? Mr. Buckland blames the engineer. I do not blame the engineer. I have no doubt he has been forced into a great deal of it. The real trouble is there is no organization for dealing with this very complicated question, and this paper is a recommendation which contains the solution. This question of dealing with lay-outs, such as we have here, is not a question for an engineer. Neither is it a question for an architect. It is a question for a combination of a group of artistic specialists of the highest calibre that can be got together. You must have a sculptor, an architect, and you really ought to have a painter and an engineer. I go a little farther back than Mr. Buckland quoted. I always think of that extraordinary commission that was appointed to deal with just such a confusion as you find here in front of the great capitol at Washington, and I should really like to know—perhaps Professor Zug can inform us—how it was that some inspired individual or individuals came to the conclusion that it was necessary to appoint this commission to deal with this great question. It is no good dilating upon the point as to whether it ought to have been an architect or an engineer. It is a much bigger question than city councillors realize, this question of laying out important central areas. Only a combination of the best brains, time, and thought can ensure the best results. I should have liked to make one point with regard to the resolution. In supporting the resolution, I bear in mind the very lucid account we had yesterday of the working of the House of Commons. Mr. Buckland must remember that America is governed in very different ways to what we are. America, with all her town-planning schemes and art commission works, is in water-tight compartments so far as her municipalities are concerned. We have a great central authority, and our local authorities wait for White Papers and so forth, and the operating of the central authority. I take it that this resolution will come before the Council of the R.I.B.A., and the Council when it comes to consider it might, perhaps, consider first of all the question of getting local authorities independently to appoint something a little bit looser than statutory commissions would be. I have had experience with these art commissions for Mr. Buckland in Birmingham. I think that the organization should consist of some big civic authority—the Mayor if possible—with certainly three or four members appointed by professional bodies right outside of any municipal control. I am very glad that Mr. Buckland has put this resolution forward, and I have very great pleasure in supporting it; but when it comes to be considered by the Council, I shall go for this thing. We must do something with it. The time is ripe, and something must be done.

Professor Zug : During the past twenty-four hours some of you gentlemen have said some very complimentary things with regard to America. The last speaker mentioned the Fine Arts Commission at Washington. It seems to me that is an illustration of how, when speaking in high praise of America, you choose the best things. That happens to be the Commission in America, which has done the best work, and its inception is explained through the influence of President Roosevelt, responding to the request of the American Institute of Architects. The British Institute can do the same thing for England. There are just two things I want to say in regard to art commissions, and of civic developments and landscape architectural development. My friends the landscape architects and city planners of America say that the first step in all civic matters is to rouse public opinion. Walter Moodie's book on "What is a City ?" is given wholly to the necessity of public educational propaganda, and in Chicago they have used it in eleven different ways—the newspapers, the moving pictures, and text books in the lower grades of the schools as well as in the higher grades. If you are going to succeed with commissions you must get the people behind you. (Hear, hear.) The city planner and landscape architect in the United States feel very strongly that some architects, I mean some American architects, think so much of their buildings that they forget all about the city and all about the approach to the building. They want their building in the most important place. And so, my friends, the city planners and landscape architects insist very strongly that every civic commission ought to have a city planner and landscape architect as a member of the commission. I do not feel I am worthy of giving any advice, but I mention these important things because the city planner and landscape architect is trained to have the broad vision that is necessary, is trained to look at the whole; and unless you get some man with this vision,

whether he is an architect or a city planner, your commission will never achieve its greatest success. It is true that Burnham was an architect, and only an architect, at first, but was led by circumstances into becoming a city planner. If you cannot have a city planner, then have someone whose training leads to such vision as is necessary for looking into the future.

Mr. E. C. Willmot : I feel that it is fortunate for Cardiff that this conference has taken place this particular year, and that we are fortunate in having had the paper by Mr. Buckland on this particular subject, because in Cardiff as we know, we have an even greater opportunity in the making, so far as city planning is concerned, than we have had in Cathays Park, and I wish to add either an addendum or amendment to the resolution which, I hope, you will see your way to accept; that a copy of this very admirable paper be sent to every member of the local City Council. The object of the paper is to start getting things done. As Professor Zug said, we have to stir up public opinion immediately. We can do our share in Cardiff by stirring up opinion amongst the City Council. I feel very sure that a paper given by such a distinguished authority and backed with the authority of the premier institute of the country would bear a lot of weight, and would eventually result in an attempt being made to set up a commission in Cardiff. We have tried to make our influence felt with the local governing authority, but I feel that if this paper was forced on to the notice of the city councillors we might start the ball rolling in Cardiff. We have heard peans of praise about the wonderful things we have done in the lay-out of this particular park, but every architect knows that if he wanted to start criticizing there are many points to which he can direct his attention. The one great feature, the central avenue, is due to the late Marquis of Bute. Looked at in a cold-blooded way, we have a magnificent avenue with an approach from nowhere and leading to nowhere. I believe that if the man of large vision had had the handling of the scheme instead of reliance being placed on an engineer, we should not have had an isolated exampl of town-planning, but a linked-up and properly connecte scheme.

MR. PERCY THOMAS, PRESIDENT OF THE SOUTH WALES INSTITUTE OF ARCHITECTS.

Mr. W. G. Newton : I should like to take up a poin which the last speaker raised, and that is a question o publicity. I feel we are dealing with a matter which is matter affecting lay opinion, general opinion, and civi opinion, yet instead of tackling the public we creep lik early Christians into our catacombs and discuss the questio in the utmost secrecy. It is true we have the press, but t do anything by the press you have to speak in headlines The press is, of course, very important, and I have n doubt that an extract of Mr. Buckland's paper has bee sent to every newspaper in the United Kingdom. But yo have to think in headlines, and I would like the press t take down these two headlines. In the first place in th matter of civic beauty

THINK IN GENERATIONS

and not in periods of yearly rates; and, secondly,

BEAUTY IS A CIVIC RIGHT.

When Mr. Buckland was talking about the present state o the committees on taste in America, it did seem to m that we are in danger of thinking in terms of ornamenta gates, fancy lamp-posts, and statues. It seems to me tha if these committees are to have a broad vision they shoul not have compulsory powers, and that for two reasons In the first place, who will be on them ? The old men, an they will get older and older, and their views older an older still. They will be absolutely stereotyped, and instea of being a help they will in time become a hindrance Secondly, only if they have to be supported by publi opinion, only if they have to be backed by arguments an proofs, will their views be really broad, alive, sound, an effective. They must win their way by the fact that thei decisions are right.

Mr. Alwyn Lloyd : I am perfectly convinced that unles we have behind these commissioners an available means o instructing public opinion our efforts will be quite in vain I understand that in America they have what are calle civic clubs, formed for the express purpose of educatin public opinion and fostering right ideals in regard to cit planning and so on. I think we might do very much mor than we are doing in that direction, and in Cardiff there is particularly good opening for such a club, which woul impress the enlightened business man and more mundan people as well as the high officials of the Corporation including the Lord Mayor. It has occurred to me that on very useful method of getting some of this work done is t tack it on to the town-planning scheme. The town-plan ning scheme is a very wonderful method of getting th machinery into motion.

The resolution was carried.

Mr. Buckland (replying) : The danger is that city coun cils will profess to recognize these civic committees and ye never refer anything to them. Why I put the resolutio forward is that the time has come for the R.I.B.A. to tak what steps it thinks advisable. Do not let us get taken u with the idea that we can do anything with city councils o with cities. Let us go to the top and get the powers t force the local authorities to consult the commission. I am in perfect agreement with Mr. Newton that these bodie should not have statutory, compulsory powers, but that they should depend upon the support they receive from publi opinion. I am going to suggest that we must not leav Cardiff without strengthening the hands of our Cardif colleagues. Mr. Keen thinks that it would be advisabl that the Cardiff Society should send a letter to th authorities voicing the views of this conference.

Mr. Ivor Jones suggested that some of the experts present that day should send a letter to the South Wales architect pointing out the excellent opportunities that existed i Cardiff for the setting up of an art commission and they could then lay this before the city heads.

This suggestion was agreed to.

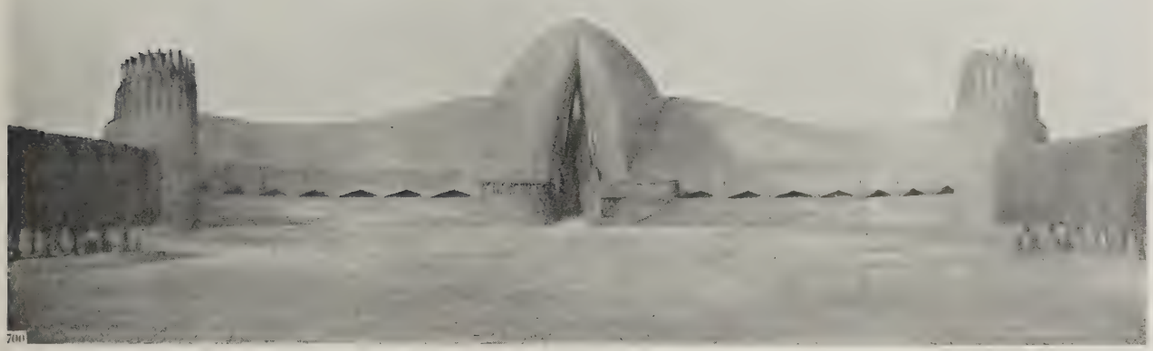
NOTE.—A list of guests at the R.I.B.A. Banquet at Cardiff is given on p. xx.

The International Theatre Exhibition

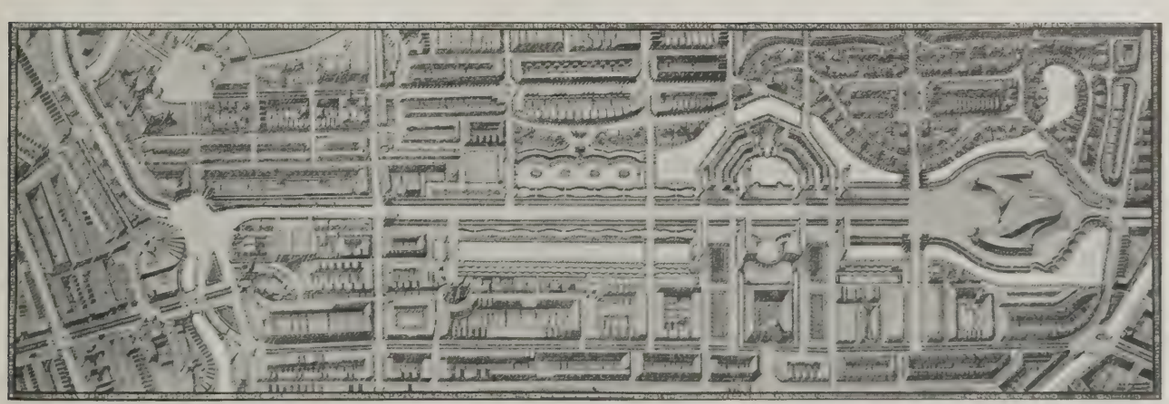
By GORDON H. G. HOLT

AN exhibition of considerable importance is now on view at the Victoria and Albert Museum, South Kensington, and it will remain open until July 16. Notice of its coming was duly given in this Journal some time ago, although a good deal of uncertainty prevailed then as to its scope and date; but at last it is a "fait accompli," and readers will do well to pay it a long visit, because never before has there been in England such a complete gathering together of designs, drawings, photographs, and models of the theatre, nor is it likely that such an opportunity will be given of studying the work of so many foreign artists for a long time to come. It fills ten rooms with some of the most alluring, able, and, here and there, intriguing stuff produced during the last fifteen years by England, America, Holland, Austria, Germany, France, Russia, and Italy. The exhibition came about in a curious way. In the course of last year, a small number of stage designs and models were shown in the Department of Illustration and Design. This somewhat meagre representation of theatre design, which was the best the museum could supply, led to suggestions in the press and elsewhere, that the museum should hold an exhibition of theatrical art on a much larger scale. At the time, however, seeing that an important exhibition of this nature was being organized at Amsterdam, no immediate action was taken; but when the Amsterdam exhibition opened, Mr. Martin Hardie (the keeper to the department) was sent to inspect and report upon it. The upshot of it came swiftly. It was transferred to London, where an influential body of theatre-lovers saw to it that it was made even completer by a more sustained contribution from England and the United States. The exhibition, let it be remembered, is essentially one of designs and models for the *modern* stage, and its international character invites eager comparisons.

Three things strike the visitor. The first is that in the matter of stage settings or costume designing England is not perceptibly behind other nations, not even Germany, Russia, or the U.S.A. The second is that our theatres, as such, are a long way behind theirs. I do not so much mean modern theatres actually carried out (although in this respect we positively have nothing to show) as theatres made perfect on paper only, just for the sake of making the design as ideal as possible. The third is that unmistakable big improvements have been brought about during the last fifteen years—improvements of colour and lighting, in the understanding and management of shapes, and in a clearer perception of the emotive functions of the

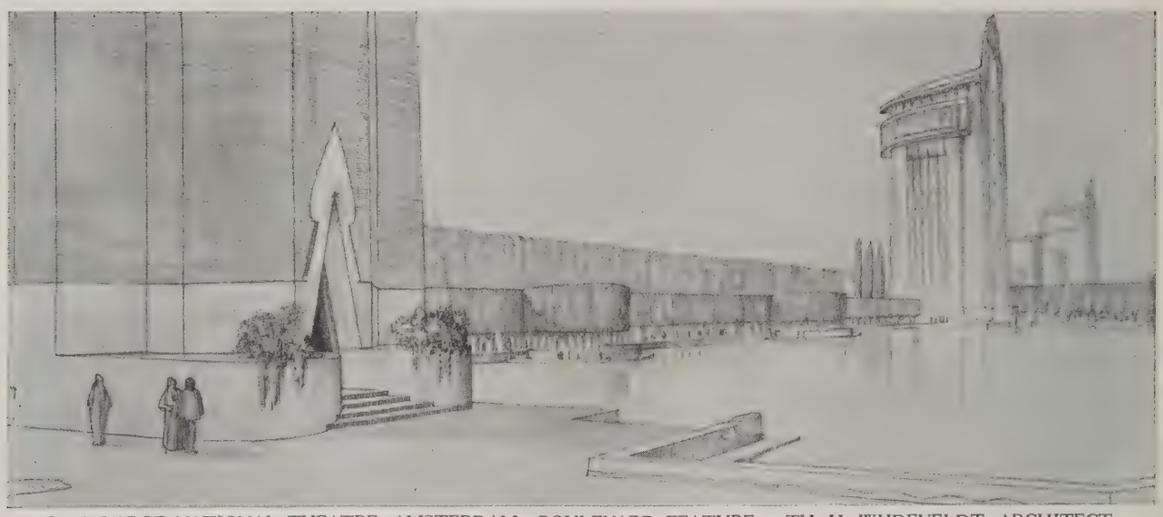


MAIN ELEVATION.



PLAN OF LAY-OUT.

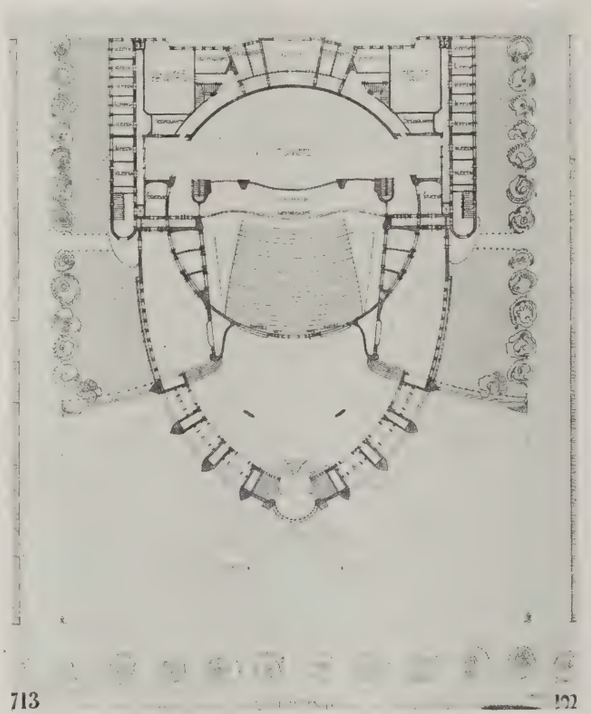
1 and 2.—A LARGE NATIONAL THEATRE, AMSTERDAM.
TH. H. WIJDEVELDT, ARCHITECT.



3.—A LARGE NATIONAL THEATRE, AMSTERDAM : BOULEVARD FEATURE. TH. H. WIJDEVELDT, ARCHITECT.

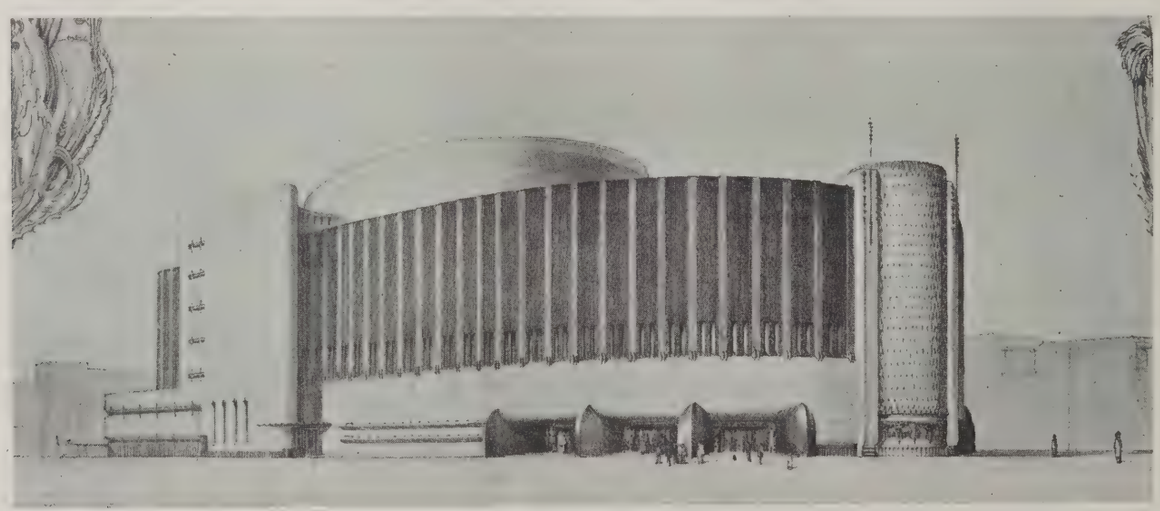
theatre. On these I hope to write at more length in another article dealing with stage settings. For the time being, let us consider the more architectural aspect of the problem, that which touches the structure and fabric, and its design.

Here, undoubtedly, other nations hold a lead. The reason why it should be so is not very apparent, but whilst I was in Munich a few months ago I had the good fortune to meet Hans Poelzig, the ultra-modern German architect, who has done a lot of theatre and stage designing, and he advanced the view that there is something lacking in us English which most foreigners apparently do possess : they seem to have a keener sense of the artistic and dramatic, and it is this extra something which urges them on, repeatedly, to design not only stage settings or



PLAN AT ENTRANCE LEVEL.

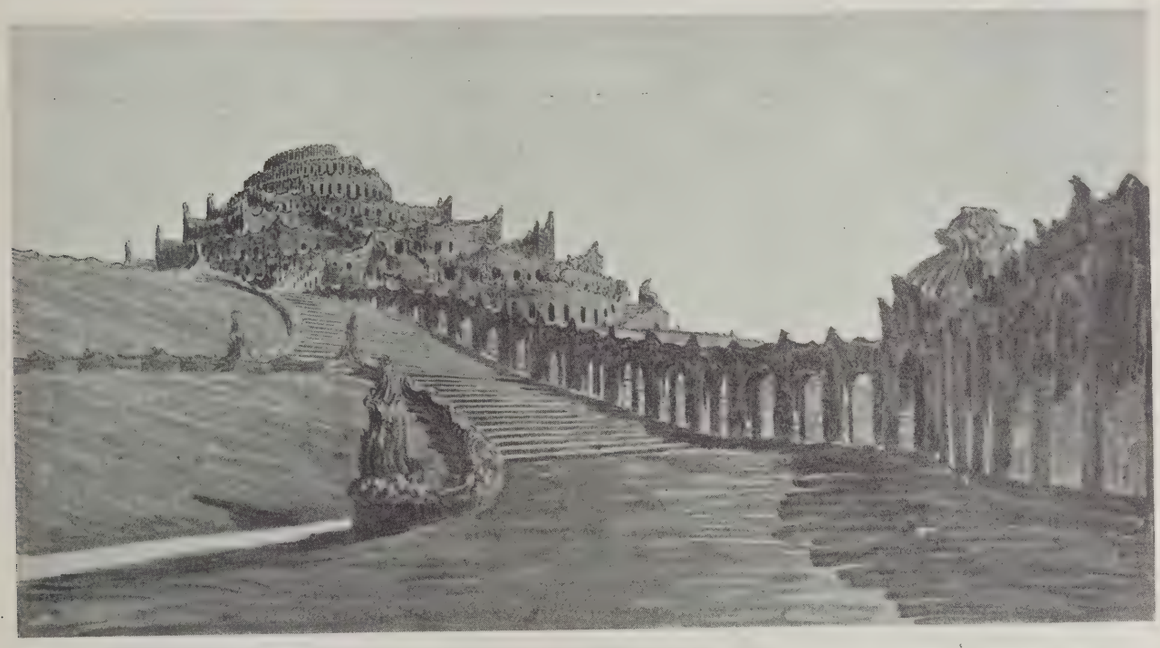
dresses, but the auditorium as well, and the whole building in fact, with all its appurtenances and approaches. They do it for the love of the thing. Whether or not their scheme be ever realized makes little difference. The point is that they must go ahead and design everything connected with the theatre in the light of modern development in stagecraft. They must bring about improvements, and they must pay attention to improvements in other cognate arts; in different methods of lighting, both the stage and the auditorium, and of seeing from the one on to the other, or in new colour - massing, new groupings of performers, or in desirable and legitimate borrowings from the art of painting, and even of sculpture. Going back from small and immediate incidentals to more basic considerations, they



PERSPECTIVE VIEW.

4 and 5.—DESIGN FOR A NATIONAL THEATRE, AMSTERDAM TH. H. WIJDEVELDT, ARCHITECT.

further study the relative significance of the theatre, its hold on the people : Intelligentsia or Rabble; its social and physiological importance. Hence a study of the relationship obtaining between it and the town (or district) in which it is or will be erected; hence its position and the way it should be approached. Hence its look, too. Altogether a vast problem. Certainly eager and gifted artists give it much thought abroad. Consider the two schemes evolved by Th. H. Wijdevelt for a National Theatre at Amsterdam (Figs. 1 to 5). Here we have two magnificent *projets* by one of the greatest theatre architects of our days, one of which schemes is to be carried out this year. Amsterdam is a rich town certainly, but neither its wealth nor its size or power can compare with that of London. Yet it produces and encourages artists of such remarkable calibre, whereas London in its amazingly clumsy and conservative way goes on accepting the usual designs by the usual firm or firms more or less specializing in theatres. In a way, of course, the education of the architect is the initial weakness or source of strength. In Germany and Austria certainly, and probably in Holland and the U.S.A., advanced architectural students are put on such subjects as a *modern* theatre, one which, if not breaking fresh ground, conceived on the right-hand side of the existing Rijks Museum; it consists of a wide boulevard flanked, near its end, by an open-air theatre on the left, and an open-air bath on the right, and with the whole vista closed by the theatre of which the main elevation is shown on Fig. 1, a large and beautiful sanguine drawing of much refinement and power. Unfortunately, there is no plan, and so one has to guess its distribution; but the shape of its doorway alone, handsome and symbolical as it is, nevertheless leaves one with a feeling of uneasiness. Fig. 3 illustrates what happens between the boulevard and the open-air theatre. This would look very effective with the help of so much water from the canals. Figs. 4 and 5 show the plan and perspective of another National Theatre by the same architect. Here the approaches have been carefully studied, and much care has been bestowed on the elevations. In a curious sort of way, the effect which one gathers after looking at the best Spanish Baroque is also discernible here, and in both it comes about by a subtle observance of the law of contrasts, which wills vast wall surfaces to be kept plain and bare against a sudden and terrific concentration of detail at given points. In the case of Wijdevelt, as with Poelzig, the richness is due to two causes : variety of shapes—circu-

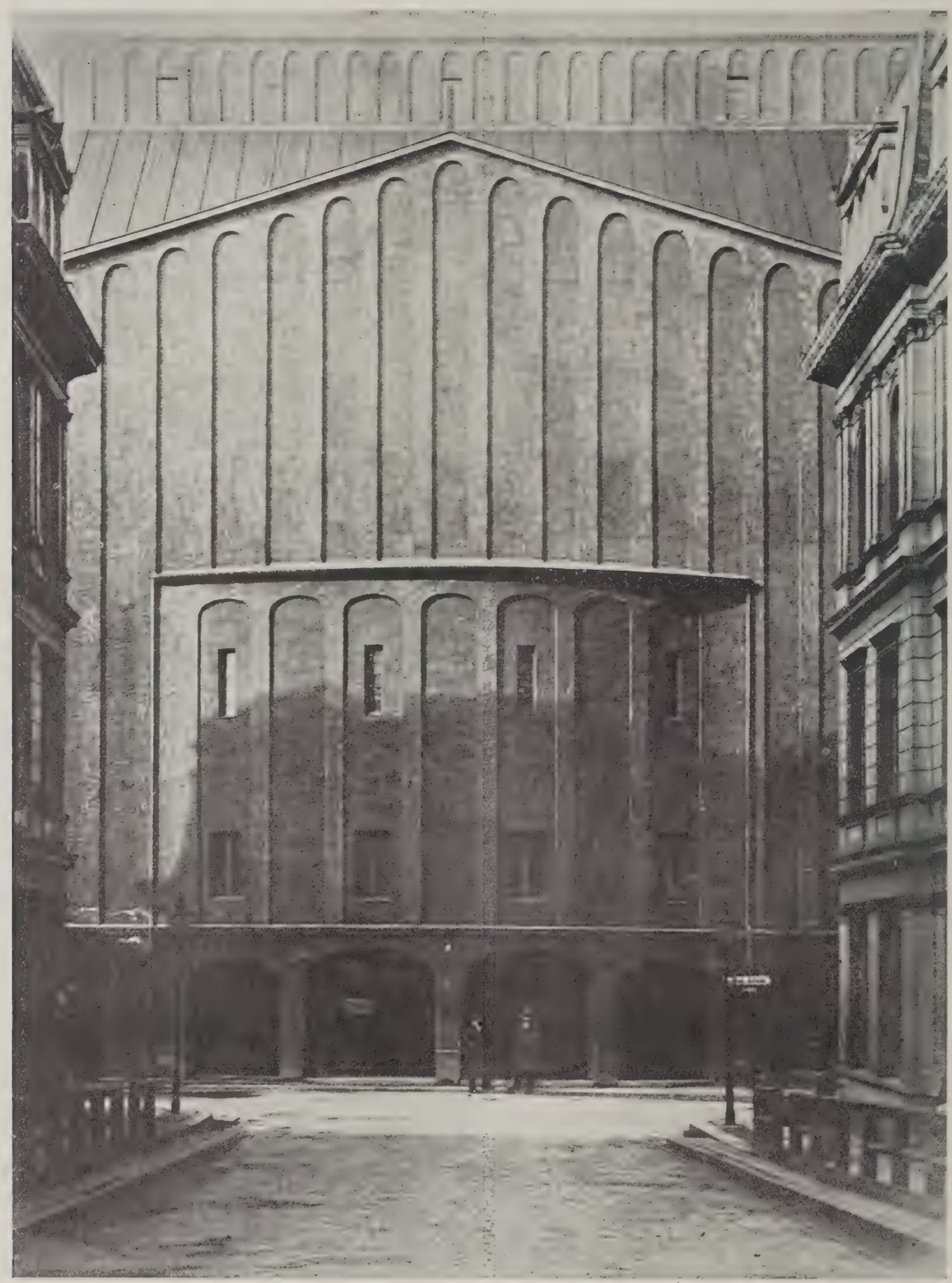


6.—DESIGN FOR A VOLKSTHEATER, SALZBURG: PERSPECTIVE VIEW OF BUILDING AND APPROACH.
HANS POELZIG, ARCHITECT.

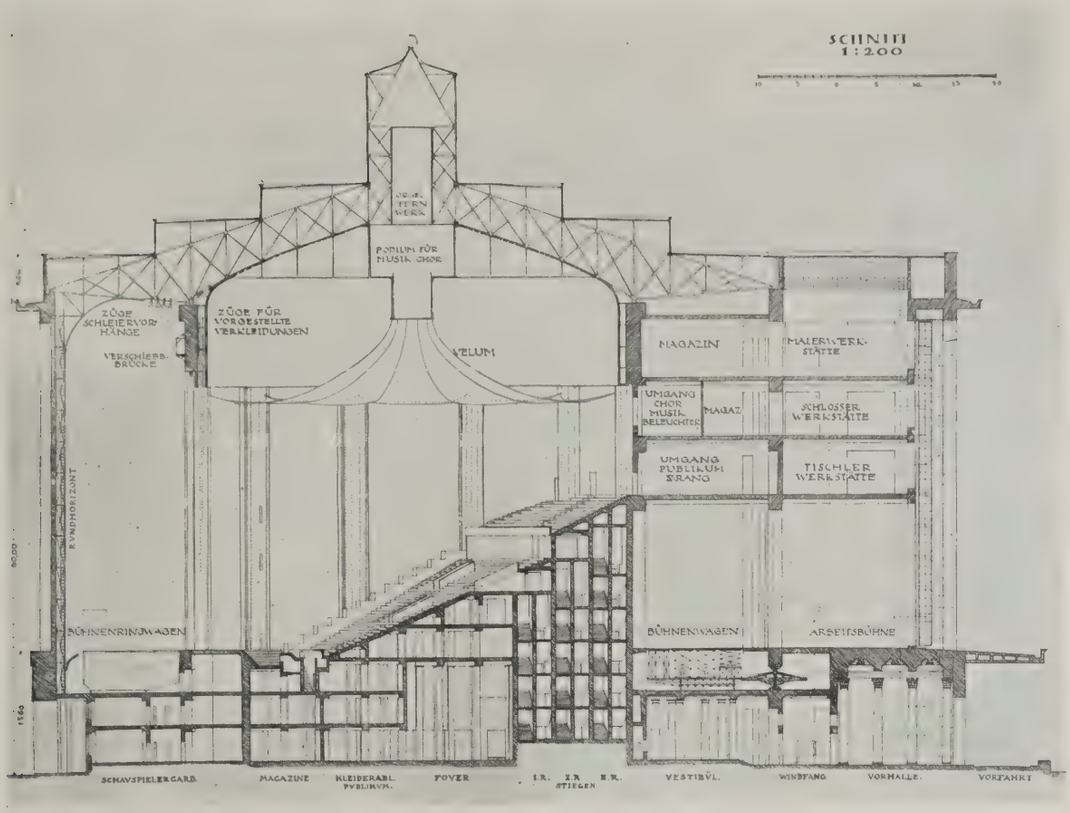
shall at any rate incorporate features which no up-to-date designer should be ignorant of, and involve the study of such intricate problems as that of circulation, visuality, lighting, scenery shifting, and so forth. It is only very recently that the studies of such modern problems are pursued in England, and that, to our knowledge, in only one particular school, whose principal and advanced master had the foresight and ability to include in the curriculum, and teach, the principles of modern planning. All the others, in this matter of theatre design, no doubt more or less fall back on the hackneyed types : the Scala at Milan, or Louis's Grand Theatre at Bordeaux, or Garnier's Opera. Guadet's "Elements and Theories" is their vade-mecum, and they still hug his theories of "cloisonnement des loges," or that famous one of the "arc doubleau de l'avant-scène"! "Der Schein, was ist er, dem das Wesen fehlt ?" Ah, Goethe, you old, wise man !

Figs. 1, 2, and 3, and Figs. 4 and 5 are not wholly utopian. The first three deal with a National Theatre at Amsterdam, and the bird's-eye view, for those familiar with that town, places it. There we see that a large and fine lay-out is lar shapes merging into elliptical ones, for instance, such as the auditorium and stage of this last theatre (on a plan not shown here), and variety of materials.

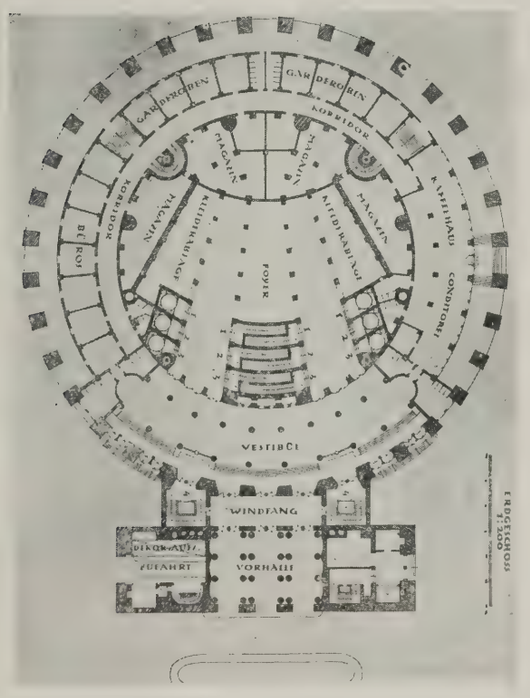
With Figs. 6 and 7 we come to that very extraordinary and gifted man, Hans Poelzig, chief architect to the town of Salzburg, who made its citizens gasp when, a couple of years ago, he carried out a large and indeed bold scheme of housing; even now a good many of them are not quite reconciled to it. Perhaps Fig. 6 of a design for a theatre at Salzburg may give us a faint clue as to the "style" he favours. Personally I fail to see much coherence in it, and the view of the interior shown in the exhibition reminds me of stalactite architecture gone frankly wild. Fig. 7 of the Grand Theatre, Berlin, gives an idea of the power of this mind, which can be amazingly Baroque or espouse the cause of studied nakedness and austerity in façades. Figs. 8, 9, and 10 are reproductions of a circular theatre by an Austrian architect, Oskar Strnad. Great ingeniousness is shown in the forcible compression of various vital elements, such as the central staircases leading to the several auditorium levels, the auditorium and, upon my



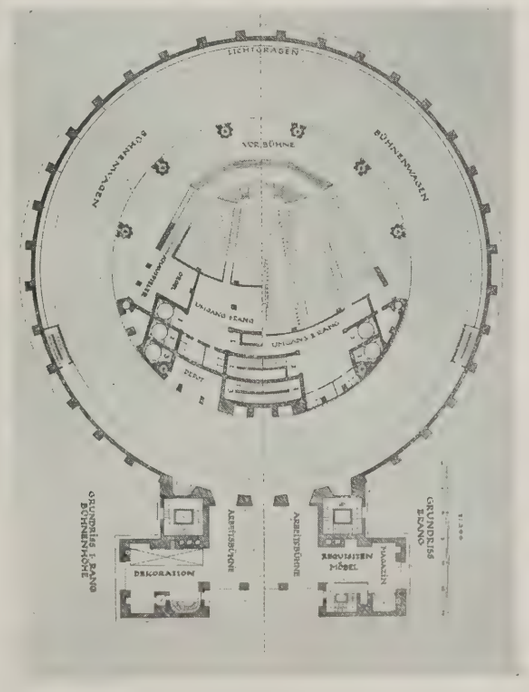
7.—THE GRAND THEATRE, BERLIN: MAIN ELEVATION.
HANS POELZIG, ARCHITECT.
(*From the International Theatre Exhibition, South Kensington.*)



LONGITUDINAL SECTION.



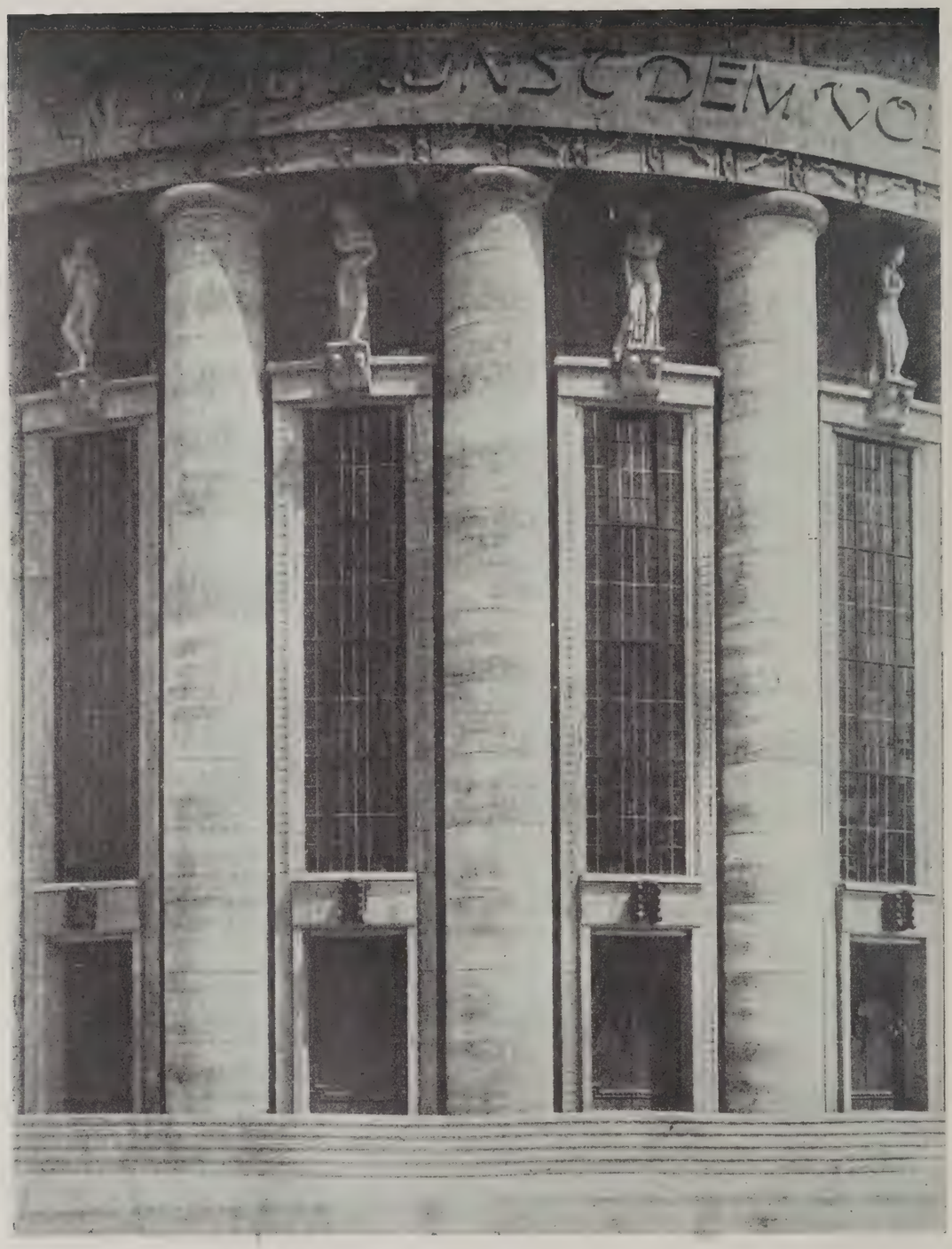
GROUND-FLOOR PLAN.



FIRST-FLOOR PLAN.

8, 9, and 10.—DESIGN FOR A CIRCULAR THEATRE. BY OSCAR STRNAD (AUSTRIA).

(From the International Theatre Exhibition, South Kensington.)



11.—NATIONAL THEATRE, BERLIN: MAIN ENTRANCES.
OSCAR KAUFFMANN, ARCHITECT.

(*From the International Theatre Exhibition, South Kensington.*)

12.—COLOGNE THEATRE (1914): SOUTH ELEVATION.
VAN DE VELDE, ARCHITECT.

soul, the stage itself, within the inner circle, which is further accentuated by eight small spiral staircases dotted on its periphery. The foyer seems, at first glance, to have an incongruous shape, but in practice it might look quite well. The "Bühnewagen" seemingly travels at the back and round the sides of the stage. The section yields some capital features at most unexpected places. There is, for instance, a mechanical contraption over the vestibule which, in the absence of any letterpress to explain these plans (and really plans should explain themselves), I read as being the means of shifting round the *décors* and elevating or lowering their levels. Again, observe that the choir and orchestra are given strange, certainly unusual positions, overlooking the auditorium at the back and also above the velum, right up in the ceiling. In the way of appearance the velum would certainly pull together the auditorium, which otherwise seems to have too much height. The National Theatre at Berlin, by O. Kauffmann, has a bold elevation of which Fig. 11 is only the central block. Other photos show the whole façade, and uncommonly strong it looks. The detail has a peculiarly strong German flavour. Fig. 12 shows the entrance to the "Volkstheater" at Cologne, built in 1914 by the Belgian, Van de Velde. Here, once more, one detects a certain immature feeling for shapes and solids, especially on the side elevations, but the absence of fussiness in the general scheme is noticeable. The two large carved windows, on either side, somewhat spoil the scale of this simple front.

There are many other designs of outstanding merit, but in this matter of theatre design the Dutch, Germans, and Austrians seem to lead by a comfortable margin.

London University Site

Continued Controversy

THE dreary squabble about the question of a site for London University continues intermittently in "The Times," Captain Swinton and the L.C.C. favouring Holland Park, and Professor Pollard and the University Senate regarding the matter as closed months ago in favour of Bloomsbury. "What we need," says Professor Pollard, in a passage of quiet but scathing rebuke, "is peace from those who talk and a fair chance for those who act." He adds, with as much pathos as impatience, "We can fairly ask to be allowed to do what we can without the obstruction and gibes of our friends." Nor does the Professor depend solely on verbal retort. He cites hard facts. He is able to adduce the substantial data that in 1913 "a few public-spirited donors privately offered about £250,000, in addition, it is believed, to £60,000 offered by the Drapers' Company, towards building a senate-house, but that "these funds were diverted from the University by the opposition offered, and apparently it is being sought to repeat that signal achievement to-day." Moreover, two magnificent Rockefeller addenda to the University are to find a place on an adjacent Bloomsbury site, where, its opponents have declared, the University could not possibly expand; and that University clubs are finding homes there. In fact, while Captain Swinton and others are talking about Holland Park, the University authorities are getting on with the building at Bloomsbury. If Captain Swinton and his friends really mean business, let them take up Professor Pollard's challenge to buy Holland Park and build on it. London will not thank them for merely obstructive tactics, but would probably help them to add Holland Park to Bloomsbury. Surely London is big enough to require both. As a substitute, Holland Park is now out of the question; as an adjunct, it would be admirable. Lord Haldane, who was a member of the Royal Commission which recommended the allocation of the Bloomsbury site, is to-day (Wednesday, June 14) at Nottingham, laying the foundation-stone of buildings that are to form the nucleus of a university for the East Midlands. Sir Jesse Boot has given the site and will defray the cost of the building. Thus the Midlanders are getting to work on their university, while Londoners are rather hazy as to whether a site has been finally chosen for theirs, although Professor Pollard's evidence on this point should be quite conclusive.

Practical Notes for Architectural Draughtsmen (Series II) Technical Schools and Science Buildings.

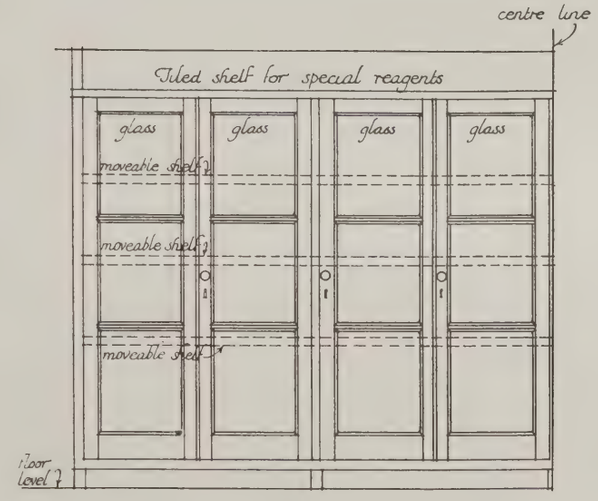
14.—Dispensary : Inorganic Chemical Laboratory

A. W. S. Cross, M.A., F.R.I.B.A., and Kenneth M. B. Cross, M.A., Architects

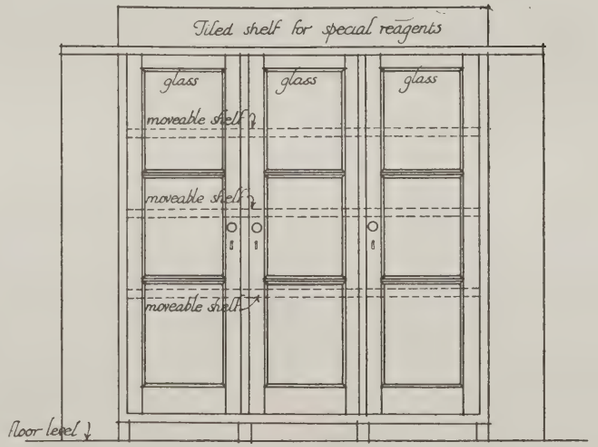
DISPENSARY

INORGANIC CHEMICAL LABORATORY.

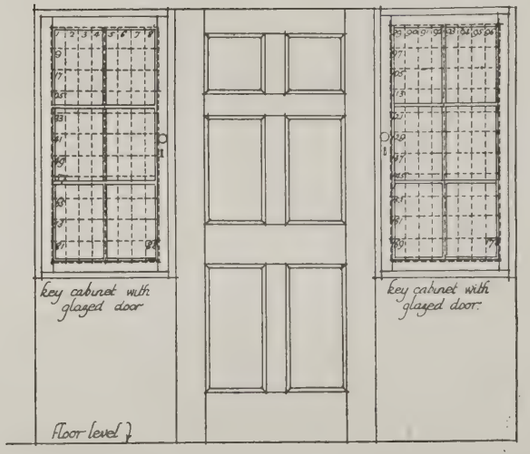
Scale of inches 1 2 3 feet.



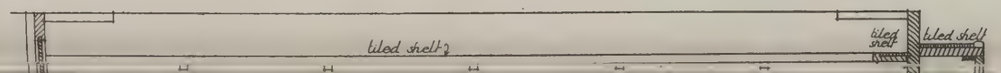
HALF SIDE ELEVATION

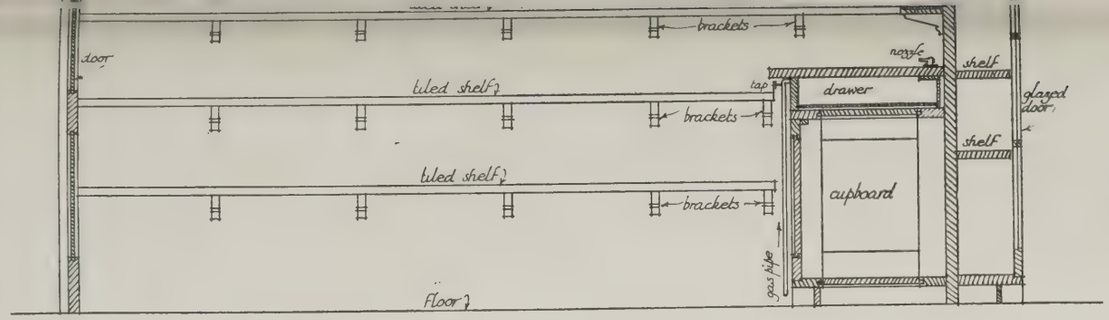


END ELEVATION



ELEVATION
(to central gangway)





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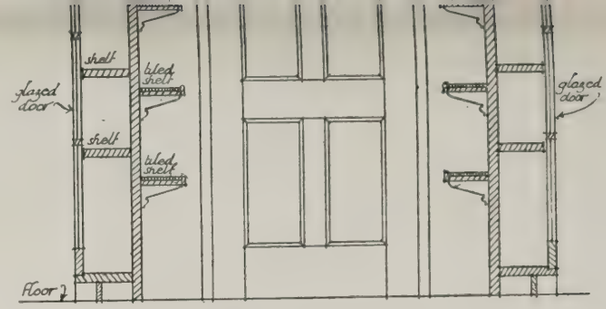

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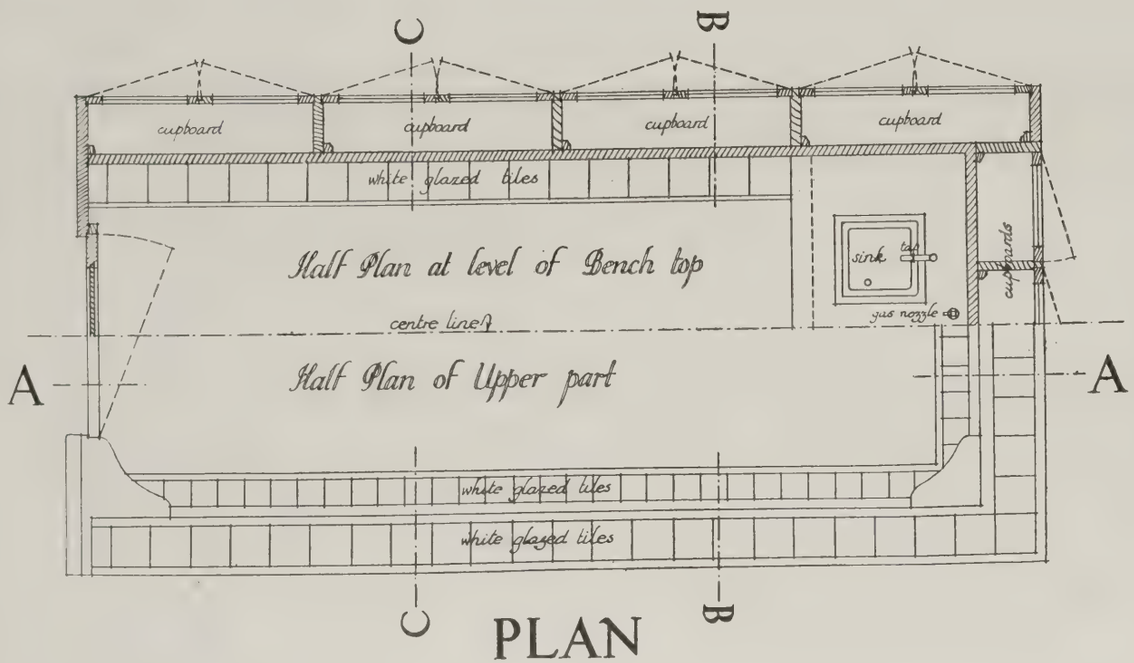
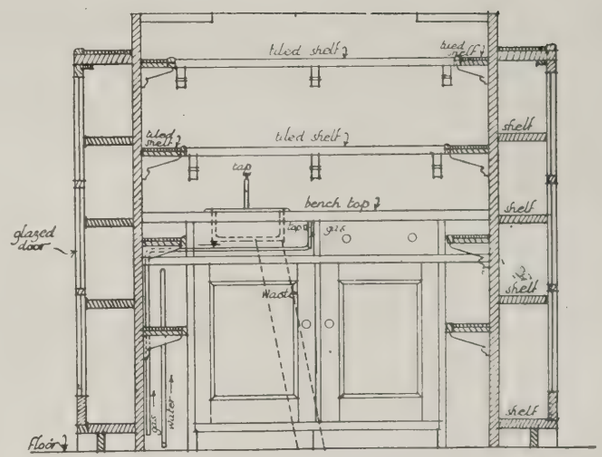


PLAN



SECTION BB.

Alfred W S. Cross, M.A. F.R.I.B.A.
Kenneth M B Cross M.A. Architects,
46 New Bond Street, London W.

This chamber is fitted with tiled shelves for the convenient accommodation of glass jars, and a bench fitted with a drawer, cupboards, sink, gas, and water connections is provided at one end. Further particulars are given in a note which appears on page 868.

Arches of Double Curvature—Construction and Stone-Cutting

By J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

(Concluded from last week's Issue.)

Arch of Double Curvature with Helicoidal Bed Joints and Conoidal Soffit—Fig. 9.

This arch could, if desired, be constructed with the elevation of the soffit arris semicircular on the convex face, and with the joints radiating from the centre as in an arch in a straight wall, but this would necessitate developed face moulds whose joint edges would be helical curves and whose soffit curves would not be circular. For practical reasons, therefore, it is better to make the *development* of the soffit curve on the convex face a semicircle, the joint edges being straight lines. The elevation of the soffit curve will then be only approximately circular, and the radiating bed joints would be helical.

There can be no real objection to the adoption of this method as it would be difficult for anyone viewing the arch in perspective to determine that the curve of the soffit was not an exact semicircle.

The radiating joints on the concave face will also be helical curves in elevation and straight lines in development, while the soffit arris on this side will be a semi-ellipse.

Another advantage of this method is that an elevation is not required for the production of the moulds, thereby saving labour on the drawing floor. In the drawing of this arch, shown in Fig. 9, a half elevation of the convex face is shown, but this is produced only after the development is made, and is here shown only to illustrate the helical curves of the joints.

Begin with the plan by drawing the convex and concave surfaces of the wall, the radii being respectively 5 ft. 6 in. and 3 ft. 4 in. Mark off the width of the opening (5 ft. 6 in.) on the convex side, and draw the jambs converging to the centre O from which the plan curves were drawn. Now complete the plan in regard to its other details.

Production of Developed Face Moulds and Bed Moulds.

The convex development must first be made. Set the dividers to a small dimension and measure the length of the arc C, A, G, in plan, making the stretch-out of the curve C′, A′, G′, in the development. With C′ as centre and C′, A′ as radius, draw the quarter circle, which will be the development of the soffit arris on the convex face.

Divide this curve into a suitable number of stones—in this case four, and a half for a keystone. Draw the horizontal bed joints of the ashlar, the height being 14 in., then draw the radiating joints, stopping them when they intersect the horizontal lines in the points 5, 6, 7, and 8. Complete the convex face moulds by drawing vertical joints to form a square bond with the courses of ashlar as for an arch in a straight wall.

To draw the joints in plan, first determine the points 1′, 2′, 3′, and 4′, on the springing line by drawing projectors from the corresponding points on the development, and transfer those divisions to the convex curve in plan. From the points 1″, 2″, 3″, 4″, thus formed draw the soffit joint converging to the plan centre O, giving points I, II, III, and IV on the concave side. In like manner the horizontal measurement between joints 9, 10, 11, and 8 are spaced out with dividers and transferred to the convex curve in plan in the points 9′, 10′, 11′, 8′. Now draw from these, lines converging to O, giving on the concave side the corresponding points IX, X, XI, and VIII.

A stretch-out of the concave plan curve can now be made by transferring the divisions on this curve to the springing line in the points D′, I′, II′, III′, IV′ for the soffit, and points IX′, X′, XI′, and VIII′ for the other joints. From these points project up to the height of the corresponding points on the convex developments, thus obtaining points I″, II″, III″, IV″, IX″, X″, XI″, and VIII″ on the concave development.

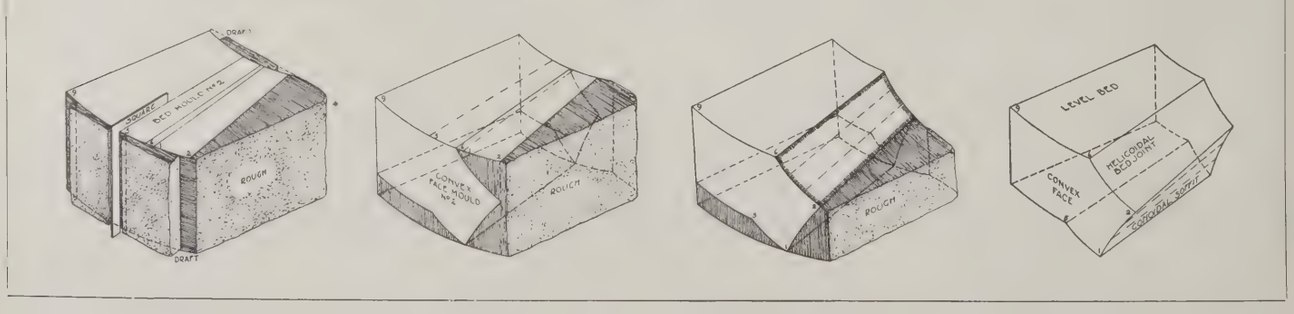
It will be observed that the radiating joints on the concave development are not normal to the soffit arris on that side. This, however, is unavoidable, and is unimportant. Face moulds for stones Nos. 2 and 4 are shown by thick lines, and in plan a bed mould for each stone is indicated. The separate plans have been drawn simply to avoid confusion in the projection, but in practice one plan only will be sufficient.

Stone No. 2—Figs. 10–13.

The dimensions of the rough block required are approximately 1 ft. 4½ in. by 2 ft. 1 in. by 2 ft. 3 in. Begin by working the top bed on which scribe the bed mould as shown in Fig. 10. The upper arris line (6) of the radiating bed should be transferred from the bed mould to the top bed. At right angles to the top bed cut the vertical joint and two or more drafts, bringing the stone to the exact height of the face mould by working an operation plane to contain the soffit arris of the lower radiating bed. On this plane scribe the bed mould, adjusting it so that it is exactly related to the lines already scribed on the top bed.

An expert stonecutter may dispense with this operation plane and proceed at once to work the cylindrical surfaces by cutting accurate drafts at right angles to the top bed, using a steel square as shown in Fig. 10.

The convex and concave face moulds are now scribed on the cylindrical surfaces, keeping the top and vertical edges



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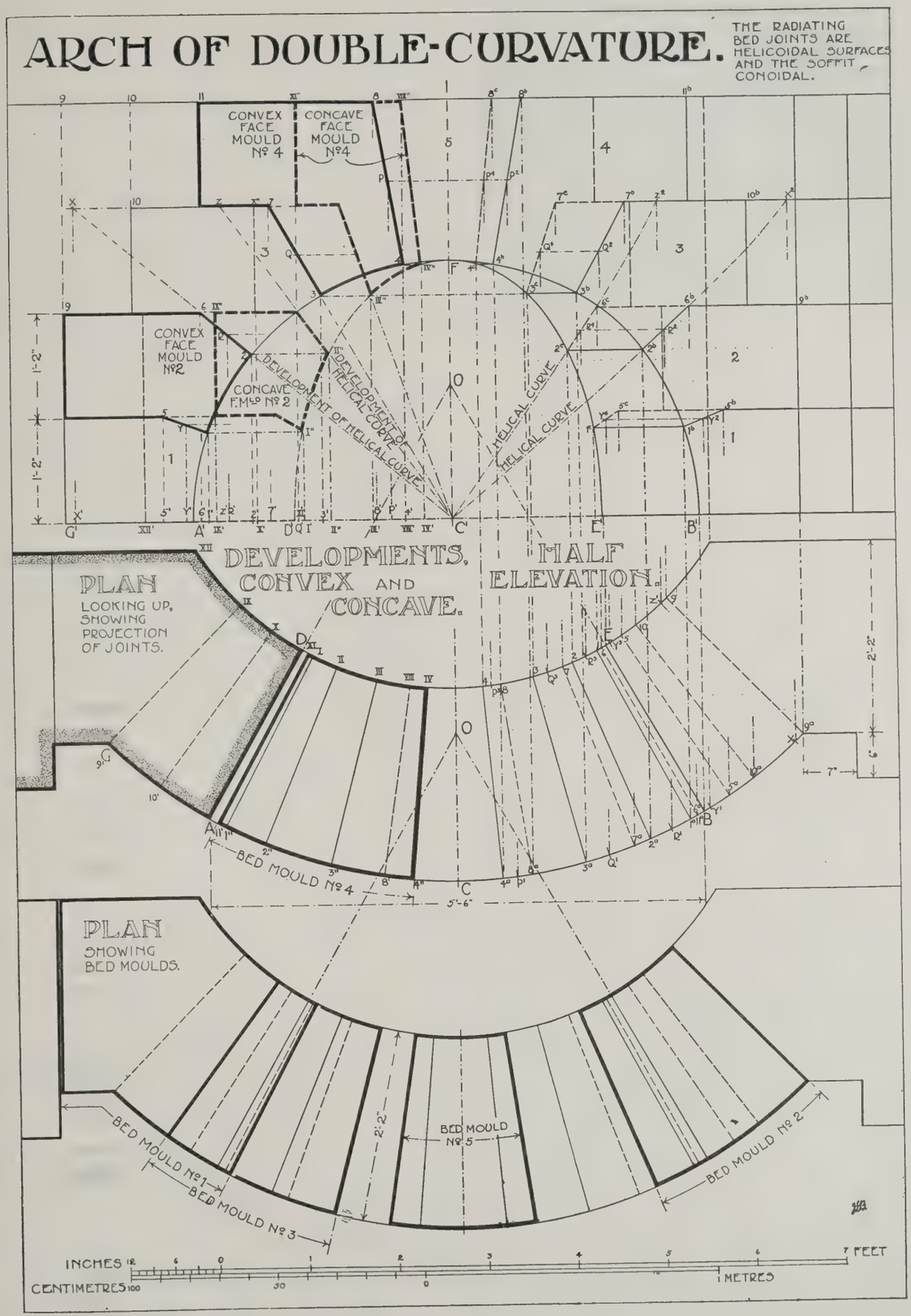


9.—AN ARCH OF DOUBLE-CURVATURE WITH HELICOIDAL BED JOINTS AND CONOIDAL SOFFIT.
DRAWN BY J. STIRLING BOYD, F.S.A.Scot., L.R.I.B.A.

Photo: J. S. Boyd.

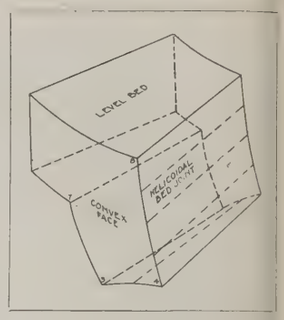
DOUBLE-CURVATURE ARCH UNDER THE CASCADE AT THE TROCADERO, PARIS.

of the moulds so that they coincide with the top bed and vertical joint respectively as shown in Fig. 11.

The upper helicoidal bed may now be worked by first cutting in chisel drafts to the lines of the face joints as scribed on both faces of the stone (see Fig. 12). Divide the curved draft 2–6 on the convex side into a number of equal divisions and the corresponding curve on the concave side into the same number of equal divisions, observing that the latter curve is shorter than the former. Straight drafts are now cut between the points marked, and by continuing the process of cutting similar intermediate drafts as required, the whole helicoidal surface is formed. The arris lines from the points 2 and 6, and the intermediate lines shown on the helicoidal bed in this figure are level lines which, if produced, will intersect with the vertical axis of the plan cylinder.

The stone may now be turned over and the lower helicoidal bed and level bed formed, the former being cut in a similar manner to the upper bed.

The conoidal surface of the soffit is now formed by sinking drafts to the soffit arris curve 1–2 on the convex face and to the corresponding curve on the concave face. These, like those on the helicoidal beds, are divided into equal parts, and straight drafts running from one face to the other as shown in Fig. 13 will be a sufficient guide for the completion of the soffit. The lines shown on the conoidal surface, like those on the helicoidal surface in Fig. 12, are horizontal, and if produced would intersect with the vertical axis of the plan cylinder.



14.

Stone No. 4—Fig. 14.

The dimensions of the rough block required for this stone are approximately 2 ft. $2\frac{1}{2}$ in. by 2 ft. $3\frac{1}{2}$ in. by 2 ft. 3 in. The method of working will be similar to that described for stone No. 2. The direction of the horizontal lines on the helicoidal and conoidal surfaces is indicated on the sketch of the finished stone, Fig. 14.

Projection of Elevation.

As already stated, the drawing of the elevation is not required for the production of the moulds, but as it may for other reasons be required the method of its projection will now be described.

The heights of the various points are projected across from the development previously drawn to meet projectors from the plan, e.g. the points 1^a 2^a 3^a and 4^a in plan are projected up to the points 1^b 2^b 3^b and 4^b in elevation.

The radiating joints on the development being straight lines, the elevation of the corresponding joints will be helical curves. To draw these helical joints in elevation—taking the joint between stones 3 and 4 as an example—select a point Q on this joint on the convex development and transfer it and the point 7 to the plan. These are shown on the right half of the plan in the points Q′ and 7^a, and the corresponding points on the concave side are Q^3 and 7. Project up from these points and across from the corresponding points on the development. The helical curves may then be drawn through the points 3^b, Q^2, 7^b, and 3^c, Q^4, 7^c on the convex and concave sides respectively.

As the curvature on those joints in elevation is very slight and not easily seen in the drawing, the projection of a larger helicoidal surface is shown containing the surface of the radiating bed between stones 2 and 3 extended to the joints X^2 and Z^2 on the half elevation.

STIRLING BOYD.

CASTLEFIELD MILL, CASTLE STREET, MANCHESTER. NORMAN JONES, A.R.I.B.A., ARCHITECT.

Architectural Details. 27.—Staircase from Castelnau House, Mortlake

This staircase, a fine example of late seventeenth-century design and craftsmanship, is of carved pinewood, and was originally painted. It is now in the Victoria and Albert Museum, by whose permission the above photograph is reproduced.

The Stability of Walls.—V

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

WALLS built to hold up a bank of earth are called retaining walls, or breast walls, or revetments. f to hold up water they would be dams r reservoir walls, but the principles are like in all cases. Let AB, Fig. 19, repre- ent a bank of earth to be held up by a all, the pressure against the wall will epend upon the nature of the earth and articularly upon what is called its angle f repose or natural slope. That means he angle from the horizontal that it ould assume if left exposed to the eather and undisturbed for an indefinite eriod, so that no further slipping might e anticipated. Most earths may be left tanding vertical for a short time, but ery soon a large piece would break away, s may often be seen in the cliffs along the ast coast of England. The natural slope aries generally between 30 deg. and 5 deg., the former being for clay and the atter for a gravelly soil, an average may e taken of 40 deg. The first falling away f an unsupported mass of earth usually akes the form of a semi-parabola, as hown at AD in Fig. 19, having the ertex half way between B and C, but ltimately it reaches the line of natural lope AC. The investigations of Rankine howed that the earth requiring support rom the wall was virtually that contained n the wedge ABE, where BE is the isection of the angle BAC. A little con- ideration will show that if a thin wall be loped backwards to rest against the line AE, there will be no thrust on it, and its nly office would be as a protection gainst the weather.

Fig. 20 shows the theoretical section of a retaining wall for earth, the back ver- tical and the face battered. This shape is adopted to throw the centre of gravity well back, just as when a man pushes, you lean back to put your centre of gravity back against him and resist his pressure. The batter may be from $1\frac{1}{2}$ in. to 3 in. per foot of height, and the thickness at base of wall is usually one-third to one- fourth the height according to the cir- cumstances. The stability may be calcu- lated, or it may be worked almost entirely graphically. Generally a wall is assumed and then its sufficiency ascertained. The centre of gravity of the wedge of earth will be found by bisecting *bc* and joining the point with *a*, then bisecting *ac* and joining the point with *b*; the intersection of the two lines will give the centre of gravity. The weight of the wedge will be found by calculation, scaling $bc = 5.6$ ft., multiplying by half the depth of wedge, 6 ft., and by the weight per foot cube $= 5.6 \times 6 \times 100 = 3360$ lb. Then for the centre of gravity of the wall, add the bottom width on each side of the top, and the top width on each side of the bottom. The intersection of the lines from the points so found will give the centre of gravity as shown. The weight of the wall will be $\frac{1.5 + 3.5}{2} \times 12 \times 120 = 3600$ lb.

Now drop a vertical through the centre of gravity of the wedge of earth to meet the line *ac*, and from the meeting point measure upwards to scale the weight of the wedge, and from the height so found draw a line parallel to the line of rupture to cut a horizontal from the bottom of this weight line. This will give the amount of thrust from the earth $= 1566$ lb. Next draw a vertical through the centre of gravity of the wall, and produce the line of thrust through it, setting off the amount beyond the line. From where the thrust line cuts the centre of gravity line set off downwards the weight of the wall 3600 lb. Complete the parallelo- gram and draw the diagonal. This will be the resultant of the forces and cuts the base at 1.29 ft. beyond the centre line. Then the maximum stresses will be

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{3600}{3.5} \pm \frac{3600 \times 1.29}{\frac{1}{6} \times 1 \times (3.5)^2}$$

$= 1028.6 \pm 2274.6$, or 3303 lb. sq. ft. compression, and 1246 lb. sq. ft. tension. A tension of 2160 lb. sq. ft. (= 15 lb. sq. in.) may be considered a safe tension in good work, therefore the wall may be taken as safe.

The depth of the foundation of a re- taining wall will depend partly upon the amount of thrust and the nature of the soil; that is to say, it must not be pushed out at the base, and it must not overload the soil. The maximum pressure on the soil would be obtained by taking the total weight of wall, including footings and concrete, and drawing a new parallelo- gram of forces to find position of resul-

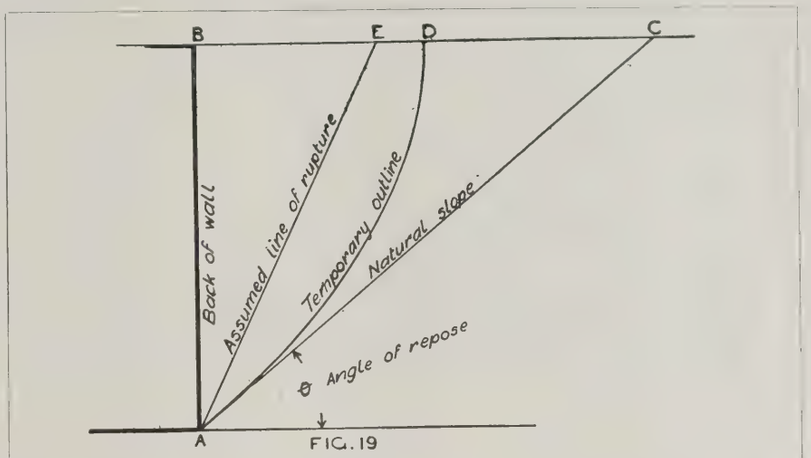


FIG. 19

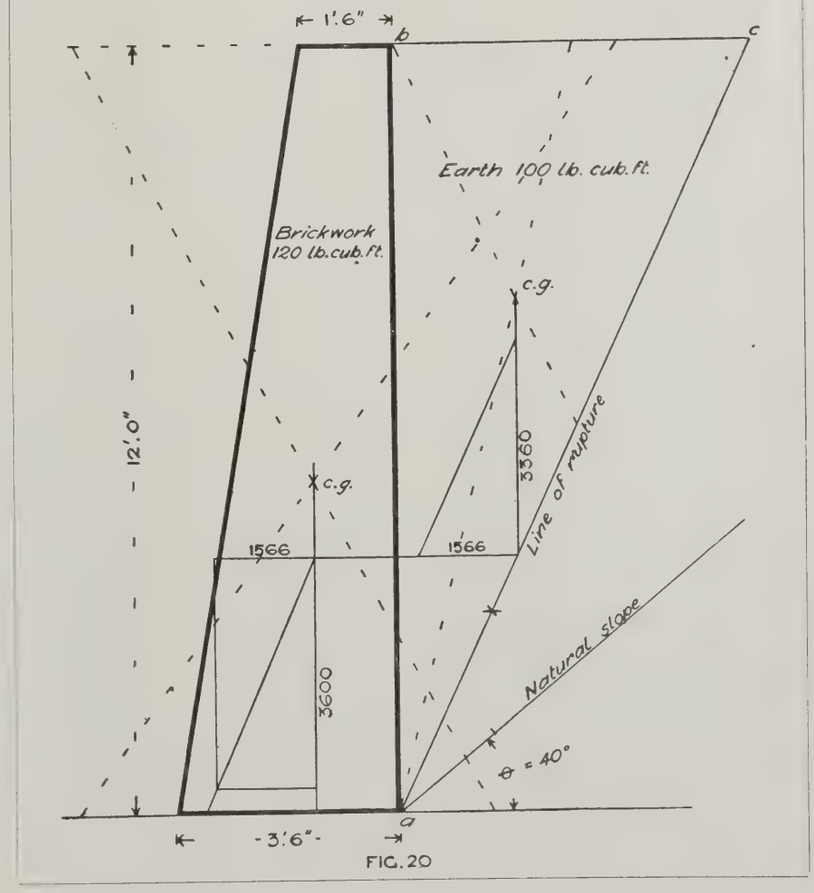


FIG. 20

tant and continuing the calculation as before. Weep holes should be put through the wall, one to every 5 or 10 sq. yards, to prevent water collecting behind it.

(To be continued.)

Correspondence

Shall Rights of Light be Abolished ?

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—Your leading article in THE ARCHITECTS' JOURNAL of May 31 states with great fairness the general case for and against the Bill which has been deposited in the House of Lords. It does not, however, appear to take into account all the legal and technical developments which have taken place during recent years. As these affect the question materially, I venture to draw attention to them.

Prior to the well-known Colls case, the owner of the premises over which rights of light had accrued was often considered fair game by his neighbours whenever he proposed to rebuild. A plaintiff had only to prove a substantial diminution of light to secure damages or an injunction. Many people undoubtedly take advantage of the legal machinery set up to protect their just rights, but actions were fought which were, as you say, scarcely, if at all, distinguishable from blackmail.

But the House of Lords judgments in the Colls case ended, and rightly ended, "the fat years for plaintiffs" to which you refer. The measure of alleged nuisance has now to be judged by the adequacy of the light left, and not by the amount taken.

Considering that the loss of light by higher buildings always seems to the victim to be more formidable than it really is, and that claims are in consequence frequently higher than can be justified in Court, the fact that plaintiffs generally have had a comparatively thin time since the Colls case is not evidence of judicial vacillation, but is rather an indication that the legal position is now sound and reasonable. No expert of experience would, I think, hesitate to-day to support what he considers to be a just claim as readily as he would support a just defence. An unreasonable defendant who is determined to build as he likes, irrespective of what injury he may do to his neighbours, has little if any chance of succeeding; and equally thin are the prospects of an obstinate or badly advised plaintiff who asks the Courts for relief in respect of damage which will still leave him a reasonably good light.

In nine cases out of ten professional advisers on each side can generally meet and agree upon a reasonable compromise; but occasionally one client or perhaps one architect is unreasonable and forces on unnecessary litigation. Under the broad common sense of the Colls judgments the over-litigious side generally suffers.

A plaintiff who sustains substantial loss to his amenities is, I think, scarcely so defenceless as you suggest. In the equally well-known case of Kine *v.* Jolly, subsequent to Colls, the House of Lords was equally divided, and in consequence allowed the much criticized judgment of Mr. Justice Kekewich to stand. This established a precedent for giving redress to a plaintiff whose building remained well lighted, but cheerless to a degree which amounts to a nuisance.

I have only been engaged in one similar case since Kine *v.* Jolly. In this case (Hocker *v.* Shields) the plaintiff, who owned a good West End house, succeeded easily, and it would seem to be clear that access of sunlight to domestic premises cannot be obstructed with impunity.

On the technical side also many difficulties have now been cleared away, and there is no longer need for either side to employ a number of expensive technical witnesses in order to establish an impressive weight of opinion. There are simple, precise, and well-known methods of measuring daylight illumination which have been used for years by the Home Office Factory Inspectors and by the officers of the National Physical Laboratory. Extensive records of the lighting conditions in many trades have been published in simple and scientifically analysed form. There are methods almost equally simple for predetermining the effect of any given obstruction for comparison with such data; and it is, I think, no longer necessary for an expert to base his evidence upon mere opinion.

There is a very prevalent idea that judges dislike scientific evidence because they cannot understand it. As far as my experience goes, judges grasp pertinent scientific data very rapidly and welcome it. What they dislike is imitation science, and that is because they do understand it also.

I have had an opportunity of reading a copy of the Acquisition of Light (Restriction) Bill to which you refer. Its object is very clearly stated to be that of preventing the acquisition of rights of light by reason only of enjoyment for any period. Will not this tend to increase rather than to demolish ancient light actions ? Every owner surely is entitled to reasonable protection against nuisance, whether it be noise, smell, obstruction of light, or any other annoyance. Only with regard to light is his right to redress restricted by the period of twenty years. I am no lawyer, but it would appear, as the law now stands, there can be no title to an unrestricted amount of light, except, perhaps, in cases of derogation of grant, although even this, I understand, is doubtful. The only rights of a dominant tenement are those of protection against nuisance—that is, obstruction which will materially interfere with the reasonable use and enjoyment of his premises. I note that the Bill was deposited in the House of Lords as far back as March 1919, and that it was prepared at the suggestion of the Royal "Society" of British Architects (which I understand is a misprint for the "Institute"), and is approved by the Institute of Builders, the Institute of Arbitrators, and the National Federation of Building Trades Employers. It would certainly appear to be desirable that a change of this magnitude should be thoroughly discussed professionally before it is dealt with by the Legislature. Your action in drawing attention to it will, I am sure, be appreciated by architects, who are called upon to advise on anticipated damages as frequently as they are to defend their clients from unreasonable claims.

PERCY J. WALDRAM.

Building as a Business Proposition

We are glad to note the increased attention which is being given to the subjects of architecture and building in the daily press. The latest instance is a series of articles in "The Daily Telegraph," entitled "Building in 1922–3," contributed by Mr. T. P. Bennett, F.R.I.B.A., in conjunction with Mr. F. J. Gayer, F.I.O.B., of Messrs. E. A. Roome & Co. The first of the series deals with building as a business proposition.

The authors deal mainly with the question of whether it is better to convert an old building or to build an entirely new one, pointing out that while the former procedure may be cheaper it is not in the long run the more economical. "A mere enumeration of essentials," they remark, "indicates the difficulty of finding a building that complies with them all. Location is perhaps elastic, but floor space is vital. It is as wasteful if seriously over as it is if seriously under the required amount. Storage space, loading capacity of floors, spacing of machinery, electric power, L.C.C. requirements in London and by-laws in the provinces, are only a few of the questions that have to be considered. A new building may cost more per unit, but it will exactly fit the requirements and allow for extension.

"Old city property has usually a small number of floors and restricted accommodation, disadvantages which become serious when ground rents rise abnormally. The wise firm, possessing or obtaining such premises and a freehold or long lease, will build with a view to letting, and in such cases will probably live rent free and earn a substantial income as a result of their investment. The firm with a growing business which is movable in a position which can never allow for large extension, should take the bull by the horns and move. They will be forced to do so in the end, and every year's delay will add to their difficulties.

"Insurance is a big factor in favour of the new building, and under suitable conditions the reduction of rate of new over old will be from 10 per cent. to 20 per cent., and in certain circumstances as much as 50 per cent. Buildings outside the London area may be re-assessed for rates at any time. In practice their re-assessment remains unaltered for years. In London quinquennial valuation is universal. Rates are, on the whole, heavier in London and the large towns than in the country districts. The basis of assessment of a new building is the rent a hypothetical tenant would pay after deducting rates and taxes, repairs, maintenance, and insurance, and, perhaps, tends to be higher than the assessment of a similar old building. Re-assessment and lower building costs tend to remove this difference. Careful consideration emphasizes the advantages of the new building. It is always a sound proposition, if the situation is viewed with extensive knowledge and a thorough grasp of the many factors upon which success depends."

Readers are invited to send in sketches and photographs for publication in these pages. A fee of 2s. 6d. will be paid for each illustration accepted. Contributions should be accompanied by a short explanatory note.

GLAMORGAN COUNTY HALL.
E. VINCENT HARRIS AND THOMAS A. MOODIE, ARCHITECTS.

THE TECHNICAL COLLEGE.
IVOR JONES AND PERCY THOMAS, ARCHITECTS.

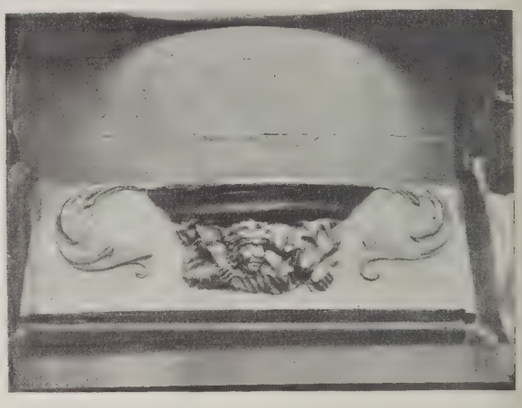
THE CITY HALL : FRONT ELEVATION.
LANCHESTER AND RICKARDS, ARCHITECTS.

THE CITY HALL: SIDE ELEVATION.
LANCHESTER AND RICKARDS, ARCHITECTS.

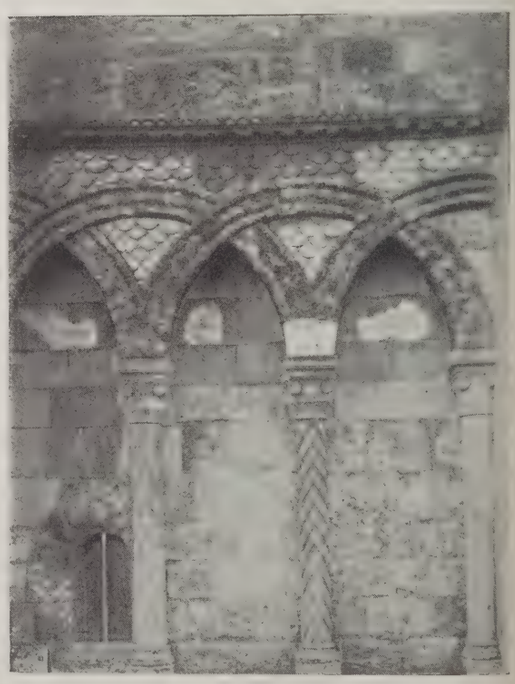
Apropos of the R.I.B.A. Conference at Cardiff, we include in this week's "Review" illustrations of some of the buildings in Cathays Park which have been more or less closely associated with the visit. The Technical College was the headquarters of the Conference, and here some interesting debates on matters of architectural importance took place (see reports in the early part of this issue). On Thursday a reception was held in the City Hall, where an interesting exhibition of prints and photographs of Cardiff was on view. The City Hall and Law Courts and the Glamorgan County Hall were visited by members of the Conference on Friday.

A Pictorial Review

An unfamiliar view of the north-west tower of St. Paul's. The illustration is also interesting for what it shows of Wren's famous and much criticized constructional devices—the screen wall and the concealed flying buttresses.—F. C.



Two curious misereres in the choir of Christchurch Priory—the upper one representing a court jester and the lower one King Richard III.—H. A. J. L.



Some further interesting details from Christchurch. That on the left shows some of the carved arms of the choir stalls. The one nearest the camera represents a fox in a pulpit preaching to some geese, just below. Behind is a cock on a stool, crowing in derision. The right-hand photograph shows a detail of some Norman carving, supposed to be unique.—H. A. J. LAMB.

What is Architectural Design?

"What, indeed?" one felt inclined to say after hearing Mr. McColl's paper, and the discussion that followed, at the R.I.B.A. last Thursday. That design is a subject of vast complication and equal fascination was clear from the rapt attention with which Mr. McColl's brilliant lecture was followed, but the exigencies of time that compelled the speaker to rush along where he would obviously have liked to linger must have been a matter for general regret.

There was usually, said Mr. McColl, someone inside or outside the profession who was a worry to architects, a thorn in the side, a stimulus to discussion. In the years before the war one such disturber of the peace was Mr. March Phillipps, whose dominating idea was the influence of race on architecture. The Greeks stood for intellect and reason, the Goths for spirituality.

Subsequently, as a counterblast to the first, a new troubler of the architectural pool appeared in the person of Mr. Geoffrey Scott, with a book called "The Architecture of Humanism." The special new impulses behind the book were two: German pyschology embodied in the theory of sympathy by Lipps, and a revived interest in the Baroque period of the Renaissance embodied in a book by Heinrich Wolfflin. The greater part of Mr. Scott's book was, however, given up to a review of the general state of rationalism, and an attempt to define what is secondary and what is primary in architectural design.

Mr. Scott starts with a text from Sir Henry Wotton: "Well-building hath three conditions: Commodity, Firmness, and Delight," or, as we might put it, use, with its planning and other contrivance, Construction for stability and endurance, and the satisfaction of the eye and mind. Architecture, according to Mr. Scott, is a focus where three separate purposes have converged. Criticism has sought to force upon architecture an unreal unity of aim. It has leaned now to one of the three, now to another, and struck between these incommensurable virtues an arbitrary balance.

This was, Mr. McColl considered, a true fall against criticism. One would try to banish the words Beauty and Proportion from the discussion of architecture, and insist upon commodity or firmness as the whole matter. If that were true, a blind man who found himself comfortable and safe in a house would be as fully appreciative of architecture as the man who could see and was affected by what he saw. How it looks is a test of architecture as well as how it works and how it bears. Mr. Scott was wrong in fastening on one third of them, the element of visible delight, as being alone the art of architecture. He thought of it as an independent element which had to compromise itself and come diminished out of the barraining with the other two. Art, in fact, was only concerned with Beauty, who comes in to look after herself when the others had made their necessary arrangements.

That that had frequently been the attitude of architects was not in dispute; they had pursued their own satisfaction in designing a face more or less disconnected with the bones behind it. But we need not assume from the first that the three elements were incommensurable and inimical. If we were to take firmness or construction for our criterion, architecture would be judged by the exactitude and sincerity with which it expressed constructive facts and conformed to constructive laws.

Before accepting the idea that construction ran its separate course and had nothing to do with beauty we should ask what happens when construction and commodity had been chiefly at work in fashioning some object. Take sailing ships: a complete structure formed to meet more difficult conditions than a building, constructed for stability and buoyancy, to meet a system of strains and pressures, and to provide living and storage room; yet it was one of the most beautiful structures made by man.

Commodity and firmness might be grouped under the one word Efficiency, and there was a friendly relation between efficiency and beauty. A thing efficiently done was rhythmically done, and rhythmic relations were what excited in our eyes the sense of beauty. To pretend, however, that everything in architecture ought to be the outcome of construction for commodity would be to ignore a great deal, especially the impulse which had always impelled men to build up into heaven, a sheer fantastic delight in extravagant size and height. There was a principle making for beauty, too, in ratios of weight and resistance in brute matter. The coincidence of construction for stability, and construction for delight gave a high intellectual satisfaction. It was clear that construction took the lead with the Gothic designers, and with what was called engineering to-day; it was equally clear that the Renaissance designer exercised a greater independence.

There was a vague and general analogy between the art of the dressmaker and the art of the architect. Each designed a covering for bodies. The independence of the architect was limited by three dimensions. Architecture was a combination of spaces, masses, and lines, and a solid figure furnished not one, but many pictures, a series of views varying with every hour and every weather condition.

In the discussion that followed Mr. H. M. Fletcher said that the main interest of the architect was not in the façade, but in the plan. Without a good plan it was impossible to produce a decent façade, and design must be in the long run a compromise.

Professor Richardson, referring to the attendance at the meeting, said that, out of the population of London, only seventy-five persons were apparently interested in the meaning of design. The rest were presumably admiring its latest manifestations in Regent Street. Design, he contended, was above technicalities, practical ideas, and "other nonsense." It meant scholarship and knowledge of motives. In these days there was the danger of stunting. It was impossible to produce anything new. One could only add something to the quota of old designs. Americans had come over here and collected motives. From this they had evolved a style.

Mr. Fletcher, speaking again, said that architects must think in perspective, working simultaneously on plan, section, and elevation, modifying one according to the requirements of the other.

Law Reports

Light and Air Judgment

Semon & Co., Ltd. v. Bradford Corporation.

June 2. Chancery Division.
Before Mr. Justice Eve.

Mr. Justice Eve, on June 2, delivered judgment in the action in which Chas. Semon & Co., Ltd., of Bradford, woollen merchants, were the plaintiffs, claiming, as against the Bradford Corporation, an injunction restraining the defendants from erecting an electrical station on the north side of Balme Street, Bradford, in such a manner as to cause an obstruction to the light of the windows of plaintiffs' warehouse. Reports of the proceedings were published in the Journal for May 10, 17, and 24.

Messrs. T. R. Hughes, K.C., and C. A. Bennett appeared for the plaintiffs, and Messrs. J. H. Cunliffe, K.C., T. J. C. Tomlin, K.C., and J. G. Wood appeared for the defendants.

Mr. Justice Eve, in the course of his judgment, said: The width of Balme Street between the two frontages is 45 ft., and the defendants' building will be co-terminous with the plaintiffs' premises for a distance of 21 ft. 8 in. along Balme Street. As a result it is directly opposite the two most easterly windows on the ground and upper floors of the plaintiffs' warehouse. From these windows it will cut off on the ground floor 48 per cent. and 41 per cent., and on the first floor 41 per cent. and 33 per cent., of the direct light heretofore reaching them. I do not propose to deal with any windows other than these four. I think Sir Bannister Fletcher—the plaintiffs' leading expert—made a perfectly proper admission when, in answer to this question, referring to the four westerly windows on each floor: "What I am asking you to say is that with regard to these windows no reasonable man, and certainly no distinguished professional man, would go into the box and say they were seriously interfered with in such a way as to give in his opinion any right of complaint," he replied: "I think it is quite likely." And again, when at the very end of his cross-examination, he was asked: "You do not really seriously suggest, do you, that on the second floor on that staircase there is going to be any ground of complaint with regard to light when the building is up?" and deliberately abstained from giving an affirmative answer, contenting himself with the observation: "I think it may well be a light staircase," he surely must be treated as assenting to the suggestion underlying the cross-examiner's interrogatory.

What, then, is the issue I have to try? It is this: Will the erection of the defendants' building obstruct the access of light to all or any of the four easternmost windows—two on the ground floor and two on the first floor—of the plaintiffs' premises to such an extent as to render those premises substantially less convenient for beneficial use and occupation as a warehouse for the purposes of the plaintiffs' business?

I think it may be questioned whether the plaintiffs when they closed their case had discharged the onus which rested on them of proving that the defendants were threatening and intending to take away so much of their light as to leave them less than is required for the beneficial use of their warehouse for the purposes of their business. But even if the plaintiffs raised a *prima facie* case of an actionable interference I think it was rebutted by the evidence given on behalf of the defendants. In particular I rely upon Mr. P. J. Waldram, whose testimony was given with commendable impartiality and with great lucidity.

The evidence given on behalf of the defendants proves a room to be adequately lighted for the purposes of adult clerical work so long as the illumination at the worst lighted working point in the room does not fall below 0.4 per cent. of the sill light. I ought to add that the light is measured in all cases at table level—that is 3 ft. above the floor.

On this basis Mr. Waldram measured the light in the areas of the plaintiffs' premises lighted by the four windows with which I am dealing. He selected on the ground floor as the worst lighted point in the triangular area lighted by the two easternmost windows, a point in the rear some 15 ft. behind the front wall, and about half way along the imaginary line forming the third side of the triangle. In existing conditions with the thick hammered glass in the windows, and with the iron grilles in front, but with no building opposite, he measured the daylight factor at that point as 1.4 per cent. of the sill light. He then proceeded to calculate by means of diagrams which are in evidence what the measurement at the same point will be if the defendants' building is erected and ordinary plain glass substituted for the hammered plate glass, and he finds the daylight factor in these circumstances will be 1.5 or 1.6 per cent., and says that this result shows that the lighting conditions on the ground floor will be "distinctly good—very distinctly above the average—quite adequate for the ordinary requirements of ordinary people carrying on a business of this kind in this sort of situation," adding "I think I may go further and say that in my opinion they will remain unusually adequate," and a little later, "Taking the area affected by the defendants' building the ground floor should remain with normal conditions"—that is, of glazing and cleanliness—"a well-lighted and an unusually well-lighted ground floor."

On the first floor, after stating his opinion that the office lighted by the three easternmost windows will remain a thoroughly well-lit office after the defendants' building is up, he proceeded to give the results of his tests and calculations. The worst lighted point in the room he puts in the angle above the telephone box—the worst lighted working point at the south end of the long desk against the east wall of the room. At the former the illumination will be 0.8 per cent.—twice the measurement at the grumble point, and at the latter 1.54 per cent. of the sill light—one and a half times the minimum of an elementary schoolroom.

In the face of this evidence, strengthened by a careful comparison of the relative proportions of floor and glazed window areas, unshaken by cross-examination and unchallenged by any satisfactory practical tests on behalf of the plaintiffs, it is impossible for me to hold that the plaintiffs have discharged the burden of establishing that the defendants' operations will constitute an actionable nuisance. The evidence proves, I think, that the plaintiffs' warehouse is and will remain in enjoyment of an unusually large amount of light having regard to its locality, and in these circumstances I can only dismiss the action with costs.

New Inventions

Latest Patent Applications.

14899.—Coignet, Ltd., E.—Reinforced concrete constructions. May 26.

14642.—Macfarlane, D. — Buildings, walls, etc. May 24.

14705.—Reid, W.—Building construction. May 25.

14612.—Wood, W. J.—Bracket scaffolding. May 24.

14899.—Workman, G. C.—Reinforced concrete constructions. May 26.

Specifications Published this Week.

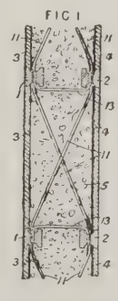
156551.—Maier, E.—Manufacture of reinforced building elements.

179689.—Hiley, A.—Construction of concrete piles or columns.

179703.—Hillman, E. B., Kimber, H., and Dadisman, H.—Forms for reinforced concrete walls.

Abstract Published.

176868.—Concrete Walls.—Mr. W. E. Clifton, St. Peter's Chambers, and J. S. Ewart and Clifton-Ewart Construction Co., Ltd., 1 Wilford Street, both in Nottingham.—A wall comprises two rows of stanchions 1, 2 with the stanchions of one row spaced away from, and preferably opposite, those of the other row. Filling-in slabs of concrete 3, 4 are placed with their ends



engaging in recesses in the stanchions, their outer faces being flush with the outer faces of the stanchions, and the space 5 thus formed is filled with grouting, concrete, etc. Tie-rods 11, 13 may be employed between the stanchions. In a modification, additional slabs are placed between the stanchions with their inner faces flush with the inner faces of the stanchions, and the spaces between the outer and inner slabs also are filled with concrete etc.; the stanchions have inwardly projecting extensions serving to key them to the concrete filling. Tie-rods may also be provided between the rows of stanchions. Corner stanchions have the recesses therein on two adjacent sides. Specification 153,633 is referred to.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, W.C. 2, from whom readers of this Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each

R.I.B.A. Council Meeting

At the last meeting of the Council of the R.I.B.A. the following business was transacted :—

Relaxation of Building By-laws.—The Council have been informed by the Minister of Health that it is his intention to introduce legislation for the extension of Section 25 of the Housing, Town Planning, etc., Act, 1919.

The Armstrong College, Newcastle-upon-Tyne.—On the recommendation of the Board of Architectural Education the Council have decided that the first three years of the Diploma Course of the Armstrong College be recognized on the usual terms as exempting from the Intermediate Examination of the R.I.B.A.

Retired Fellowship.—Mr. J. Douglass Mathews (F) was transferred to the class of "Retired Fellows."

Details of Science and Technical Buildings

An essential feature in all well-equipped laboratories is a chamber centrally placed in connection with the chemical laboratory from which chemicals, solutions, and apparatus can be distributed for general use by the students. Owing to the special nature of its contents this chamber is usually under the control of the demonstrator and, as shown in our illustration, pages 856–7, it is fitted with tiled shelves varying in width from 5 in. to 7 in., about 12 in. apart, the lowest shelf being 18 in. from the floor level, for the convenient accommodation of glass jars. As the dispensary is frequently used for making up solutions and for experimental work a bench fitted with a drawer, cupboards, sink, gas, and water-connections is provided at one end. The internal dimensions of the example given are 11 ft. 0 in. by 4 ft. 6 in., and it will be noticed that the lateral walls, which are 5 ft. 6 in. in height, are conveniently lined with shelves and glazed doors. Fume cupboards are sometimes provided in dispensaries of a more elaborate type. These illustrations form the fourteenth of the series of drawings of science and technical buildings specially prepared for the JOURNAL.

The Week's News

New Pavilion for Hastings.

£1,100 is to be spent on erecting a pavilion on the new municipal tennis courts.

Cenotaph for Swansea.

Swansea War Memorial Committee have decided to build a cenotaph 30 ft. high in similar style to the Whitehall one.

Passing of Cassiobury Park.

Cassiobury Park, the ancient seat of the Earls of Essex, is to be sold by auction.

Hartlepool Sea Wall.

Hartlepool Corporation are considering the carrying out of extensive works for the protection of the fine sea wall and promenade on the headland.

France and Domestic Appliances.

The French Government have decided to open a competition among French inventors for all kinds of appliances to facilitate housework. Prizes to the amount of nearly £400 are offered.

New Mosque for London.

A mosque costing £15,000 is to replace the existing one in Melrose Road, Southfields, S.W., belonging to the Ahmadia movement, a religious body founded about thirty years ago in the Punjab, India.

Winchester College War Memorial.

On July 15 there will be a ceremony at Winchester College to dedicate the new cloister, designed by Mr. Herbert Baker, which is to be the principal part of the war memorial.

Spalding War Memorial.

A "Temple of Remembrance" has been unveiled by Sir Ian Hamilton at Spalding in memory of the 250 men of the town who fell in the war. Sir Edwin L. Lutyens, R.A., F.R.I.B.A., was the architect.

The Hastings Music Pavilion.

The cost of the new music pavilion is to be kept within the original estimate of £5,000, £15,000 less than the highest proposal.

Southend Racecourse.

Plans have been completed for a new racecourse at Doggett's Farm, Rochford, and a contract has been entered into with Mr. Malcolm McAlpine for the erection of stand, stables, etc., and the laying out of paddock and lawns.

Fire in the City.

In New Union Street, Moorfields, fire occurred in the upper portion of a five-storied building in the occupation of the Sirap Equipment Company. The top floors were nearly burnt out, and the greater part of the roof was destroyed.

Whitby Abbey Restoration.

Great care is being exercised in the restoration of Whitby Abbey. The work is being carried out by His Majesty's Office of Works, and is proceeding satisfactorily. In removing the fallen debris evidence of much older buildings than the present ruins has been revealed. It is considered more than probable that the present site of the Abbey is also that of previous religious houses upon the East Cliff, beginning with the monastery of St. Hilda.

Port Extensions at Algiers.

Work has begun in connection with the enlargement of the Port of Algiers. The new port will cover an area of 115 hectares, and there will be constructed, in addition, two new dry docks, five new moles, and new wharves, embracing an area of 175 hectares.

Torquay Sea Front Improvements.

Proposals have been placed before the Town Council for a big development in the sea front district at a cost of £28,000. This includes the making of a promenade, the provision of additional pleasure grounds, and the filling in of the inner harbour.

King George V Sanatorium.

The King has commanded that the name of "King George V Sanatorium" is to be given to the buildings being erected for the Metropolitan Asylums Board at Godalming, near Hydons Ball, on a site acquired by the National Trust a few years ago as a memorial to the late Miss Octavia Hill.

King's College War Memorial.

King's College War Memorial, a new chapel doorway, has been unveiled by Major A. T. C. White, V.C. The doorway is of black oak and sycamore, and the names of the 230 students who fell in the war are engraved on the flanking panels. Mr. F. C. Eden, F.R.I.B.A., was the architect.

Deal and Walmer War Memorial Hospital.

Plans of the new War Memorial Hospital have been approved at a special meeting presided over by the president of the Hospital Committee, Lord George Hamilton. A sum of between £16,000 and £17,000 has been subscribed, and the hospital, which is to be erected in the London Road, on a site presented by Mrs. Marke Wood, will provide accommodation for forty beds.

Site of Evesham Abbey for Sale.

A portion of the site of the old Abbey of Evesham and the historic Almonry and Gatehouse is to be sold. The market gardens for which Evesham is now so famous were in cultivation by the monks of Evesham Abbey more than a thousand years ago. Little remains of the abbey but a few ruins. The sale will be conducted by Messrs. Yates and Yates, of Hanover Square.

Bournemouth Improvements.

With a view to increasing the accommodation for boys at the secondary school, the Town Council have approved of a recommendation of the Education Committee to obtain the Lowther Road Hospital at a cost of £11,000, which is within a short distance of the existing school, and which could easily be adapted for school purposes. The necessity of providing a tramway shelter in the square has been considered by the Town Council, and plans are to be prepared for a suitable building at a cost not exceeding £4,000.

Exhibition of Japanese Lacquer.

At the recent sale of the second portion of the Tomkinson collection, the Victoria and Albert Museum was enabled, by the generosity of personal friends of the late Mr. Michael Tomkinson, to acquire an important series of examples of Japanese lacquer, which have now been placed on exhibition in Room 41. The museum has also recently acquired several notable examples of fifteenth, sixteenth, and seventeenth century lacquer as examples of the earlier stages of the development of the art in Japan.

University for East Midlands.

To-day the foundation stone is to be laid at Nottingham of the new buildings which are expected to form the nucleus of a university for the East Midlands. The main block of buildings will house the departments of arts, chemistry, physics, and administration. Room will also be found temporarily for other sciences such as geology and biology. Additional blocks of buildings will gradually be erected until the whole of the departments of the present college, excepting those of technology and evening work, are accommodated.

L.C.C. Central School of Arts and Crafts.

The annual exhibition of the work of the session of the L.C.C. Central School of Arts and Crafts will be open until June 21 from 10 a.m. to 8 p.m. daily, Saturdays 10 to 12 noon. Admission is free on signing the visitors' book. The exhibits include work in architecture, furniture, wood and stone carving, stained glass, pottery, embroidery, tapestry, and other weaving, silversmithing and allied crafts, writing and illumination, printing, bookbinding, wood engraving, book illustration, etching, lithography, miniatures, drawing, modelling, and design.

Building Surveyors' Association.

On Saturday next the annual general meeting of the Building Surveyors' and Inspectors' Association will be held at Liverpool under the chairmanship of Mr. William J. Stone, M.R.S.I. The programme includes a visit to Liverpool Cathedral by kind permission of Mr. G. Gilbert Scott, R.A. The party will be conducted by Mr. O. Pittaway, clerk of works. Lady friends are invited to the visit and to the luncheon, and adequate arrangements will be made for their entertainment during the business session. At the business meeting the officers and executive will be elected, and the following motion put forward by the Executive Committee: Rule 4. To be amended to permit 40 per cent. of members other than those employed by Local Government Authorities, necessary as, and any other alterations, resulting from N.A.L.G.O. Conference.

The Week's News

(*Continued.*)

Port Elizabeth Electricity Supply Scheme.

H.M. Trade Commissioner in Cape Town has forwarded to the Department of Overseas Trade a cutting from the Eastern Province "Herald" of Port Elizabeth with regard to the City Council meeting held on April 26, which gives the award of contracts in connection with the municipal electricity supply in respect of Sections (*a*), (*b*), (*c*) (Part I), (*d*) and (*e*). This Report may be seen by interested United Kingdom firms on application to the Department of Overseas Trade (Room 49), 35 Old Queen Street, London, S.W.1. The Committee of the Council report with regard to Section (*c*) (Part 2) for concrete circulating water pipes that none of the tenders submitted was suitable. They recommended the Council to call for fresh tenders for cast-iron pipes.

Sir Edwin Airey.

Mr. Edwin Airey, who has just received a knighthood, is the governing director of Messrs. Wm. Airey and Son, Ltd., of Leeds and Barton-on-Humber, building contractors. During the war Mr. Airey diverted his firm to national service in different parts of the country, including the construction of gun-testing ranges and hangars and other buildings. After the armistice Mr. Airey devised a system of concrete construction of houses, and this was officially approved by the Ministry of Health. He is a past president of the Leeds Association of Building Trade Employers, a member of the executive committee of the Yorkshire Federation, and a Fellow of the Institute of Builders.

Tour of Italian Towns.

A tour of Italian towns of town-planning interest has been arranged for September next in connection with the conferences of the International Garden Cities and Town Planning Association and the Congrès International de l'Habitation at Rome. The party will leave London on September 14, and arrive back on October 1. Milan, Bologna, Florence, Rome, Pisa, Genoa, and Turin will be visited in the order named. Six days will be spent at Rome. In each of the towns the party will be met and conducted, and everything will be done to make the tour interesting and enjoyable. Special visits during the stay in Rome will be arranged. Further particulars will be supplied to possible participants on application to the secretary at 3 Gray's Inn Place, W.C.1.

Eastbourne Town Planning Scheme.

A committee has been appointed to discuss the details of a projected town-planning scheme. In a special report on the subject, the Borough Engineer (Major Roseveare) observes: "Thanks to the Seventh Duke of Devonshire, advised by Mr. G. A. Wallis (first mayor of Eastbourne), who on these matters was fifty years ahead of his time, the Gilbert family, Mr. F. G. Cooke for the Ralton estate, and others, Eastbourne is probably the best town-planned area in the country, and the least the present generation can do is to make every endeavour, with the added advantage of the powers of the Town Planning Act, to continue a development which will justify this heritage."

£50,000 Brighton Motor-coach Station.

A special committee is considering the offer of the Southdown Motor Company to take over the site of the Brighton Aquarium on a sixty years' lease. In place of the present building, the company's proposals include the erection of a large motor-coach station. Above the station there will be—if the Corporation close with the offer—a palm garden, tea-rooms, or an open-air palm court.

Liverpool University Exhibition.

The annual exhibition of the work of the students of the Liverpool University will be held at the Walker Art Gallery from June 30 to July 15. The Right Hon. Lord Riddell will perform the opening ceremony at 4.30 p.m. on the first day, and the exhibition will be open to the public free of charge from 10 a.m. to 6 p.m. every weekday. Among the work shown will be the drawings submitted for the Rome Scholarship.

Trade Catalogues for Australia.

H.M. Senior Trade Commissioner at Melbourne has notified the Board of Trade that he has received requests from the following institutions to be supplied with United Kingdom trade catalogues:

Working Men's College (Melbourne Technical Institute), 124 Latrobe Street, Melbourne.

Public Library, Museum and Art Gallery, Adelaide.

Public Library and Art Gallery, Perth, Western Australia.

Public Library of New South Wales, Macquarie Street, Sydney.

An important concession has been secured by H.M. Senior Trade Commissioner in Australia in this connection. Through his representation the Department of Trade and Customs have decided to admit trade catalogues duty free when such publications are dispatched direct to public libraries, technical schools, or working men's colleges.

Gas Mantle Industry.

At a meeting of the Board of Trade Committee inquiring into the importation of German gas mantles, Mr. Soper, for the Incandescent Gas Mantle Manufacturers' Association, asked for protection under the Safeguarding of Industries Act. He said that before the war the Germans had begun to form a huge combine controlled from Berlin, which kept under strict discipline all the manufacturers of mantles. The German manufacturers, paying very low wages, were sending out large quantities of gas mantles. So far as could be discovered, the Germans were paying ten marks (about 2¼d.) an hour as against the equivalent of thirty-two marks in this country to-day. He expressed the opinion that if a duty of, say, 33⅓ per cent. were imposed on imported mantles, the German manufacturer would reduce his price so that the cost to the consumer would remain the same. So that instead of the money going to the German manufacturers, it would go to the British Treasury.

A witness called by Mr. Soper said that since the war German firms had sent "hints" to firms in this country that if they ordered mantles for the pretended purpose of forwarding them to America or elsewhere they could dodge the Reparations Duty.

Competition Award

Bury Super Cinema.

The plans of Mr. C. R. Cooper, A.M.S.A., of 20 Market Street, Bury, have been awarded the first premium in a limited competition for the erection of a super cinema in Bolton Street, Bury, for the Castle Picture Palace Co., Ltd., of Bury. Mr. Halstead Best, of Blackpool and Rochdale, architect, was the assessor. The design has been accepted by the company.

Coming Events

Wednesday, June 14.

Society for the Protection of Ancient Buildings.—Annual Meeting at the rooms of the Society of Antiquaries, Burlington House, Piccadilly. Mr. A. Clutton-Brock will speak on "Restoration and Renovation." The chair will be occupied by Mr. J. Frederick Green, M.P. 4 p.m.

Thursday, June 15.

R.I.B.A. Public Lecture: "Some London Streets and their Recent Buildings." By Professor C. H. Reilly, M.A., Roscoe Professor of Architecture, University of Liverpool. 5 p.m.

Friday, June 16.

The Art Workers' Guild, 6 Queer Square, W.C.1.—Election of candidates. "Fresco Painting and Tempera versus the Easel Picture." 8 p.m.

Town Planning Institute. — Eighth Annual General Meeting to be held at the Institution of Mechanical Engineers, Storey's Gate, Westminster, S.W.1. 5.30 p.m.

Saturday, June 17.

R.I.B.A. visit to St. George's Chapel, Windsor.

Northern Architectural Association Club.—Annual excursion to Fountains Abbey and Hall, and Markinfield Hall.

Wednesday, June 21.

R.I.B.A. Public Lecture: "The Continuity of English Architecture." By Mr. W. H. Bidlake, M.A. (Cantab.) 5 p.m.

Publications Received

"The All-Electric Age." By Adam Gowans Whyte, B.Sc. Price 7s. 6d. net. Constable & Company, Ltd., 10 Orange Street, Leicester Square, W.C.2.

"Schedule of Prices for Works and Repairs to Buildings, etc., of the War Department." Price 15s. net. Printed under the authority of H.M. Stationery Office by Harrison and Sons, Ltd., St. Martin's Lane, W.C.2.

"Coal-Tar Colours in the Decorative Industries." By A. Clarke, F.C.S. Price 6s. net. Constable & Company, Ltd. 10 Orange Street, Leicester Square, W.C.2.

"The Berks, Bucks, and Oxon Archæological Journal." Vol. 27, No. 1. Edited by the Rev. P. H. Ditchfield, M.A., F.S.A., and John Hautenville Cope. Price 3s. net. Published for the Berkshire Archæological Society by Basil Blackwell, Broad Street, Oxford.

Trade and Craft

Soundproofing Buildings.

Messrs. F. McNeill & Co., Ltd., of Spencer House, 4 South Place, Finsbury Pavement, London, E.C.2, have sent us the following communication :—

"We have been very interested in the article on "Sound-proofing Walls and Partitions," in your issue for May 10, and think it may interest your readers to know that 'Slagbestos,' a pure mineral fibre of British manufacture, has remarkable efficiency as a sound-deadener, while at the same time it is indestructible, vermin - proof, and fireproof. Actual tests prove 'Slagbestos' to be most efficient."

"It is unfortunate that in this country so little attention has been given and so little knowledge attached to the problem of sound-deadening in buildings, and because of this it frequently happens that any builders' rubbish, or ashes and lime, are put between the floors of houses in an attempt to render the floors to some extent sound-proof. This primitive method is often the source of fungus and unpleasantness being introduced into a house, with the further additional risk of dry rot being induced in the timber. 'Slagbestos' has none of these disadvantages. It is absolutely sanitary, and many eminent architects use it because of its value in preventing dry rot in buildings."

"'Slagbestos' is composed of a mass of infinitely fine fibres or filaments interlacing one another in all directions, with the result that innumerable air cells are held in confinement, causing the sound waves to be most effectively broken up."

An Exhibit of Mechanical Appliances.

Mechanical appliances, all of great value to the farmer, and many of them of interest to municipal engineers and others, are being exhibited by Messrs. Ruston and Hornsby, Ltd., of Grantham, at the show of the Royal Agricultural Society at Cambridge. The exhibits include the "British Wallis" tractor (which secured the first prize and gold medal in the three furrow class at the Royal Agricultural Society of England tractor trials, 1920), thrashing machines, a clover huller, chaff - cutting machine, centrifugal pumps, oil engines, traction engines, motor rollers, a gas producer, a gas engine, petrol paraffin engines, and tractor ploughs. The "Ruston" cold starting oil engine represents a most advanced construction of internal combustion engine using liquid fuel. It will use the cheapest fuel oils obtainable, either crude, residual, or tar oils. The fuel consumption under working conditions does not exceed .42 lb. per b.h.p. per hour in the larger engines, and the small engines do not consume more than .48 lb. per b.h.p. per hour. The "Ruston-Hornsby" petrol paraffin engine has been designed to meet the needs of those who require comparatively small power units of high-class construction. Reliability of service coupled with economy and ease of management has been the first consideration. First cost, whilst quite low, has been made subservient to these all-important factors. It is claimed that the engine is readily started on petrol without any preliminary heating, and in a few minutes the fuel can be changed, if desired, to refined petroleum, paraffin, or kerosene. In the "Ruston" refuse gas producer the general principle of gas production is the same as in the case of the anthracite gas producer. Complete combustion of fuel occurs on the firegrate, and the resulting carbonic acid gas is reduced to monoxide by its passage through an incandescent mass of charcoal. In addition, marsh gas, hydrogen, and tarry vapours are given off by the distillation of fresh fuel in the upper part of the generator. "Ruston" motor rollers are made in two types, the tandem for asphalt rolling, and the three-wheel for general use on ordinary or tar-macadam roads. The gears are not disengaged when reversing, a separate clutch being used for both forward and reverse. The change-speed and reverse gears are of hardened steel, mounted on a shaft running in ball or roller bearings. The extra slow bottom gear allows the roller to travel as slowly as is possible with a steam roller without slowing the engine, It is therefore possible to develop full power on steep hills while travelling very slowly.

"Heating."

Under the foregoing title Messrs. Edward Bingham and Sons, Ltd., have issued a dainty brochure illustrating some of the contents of their showrooms. The booklet deals mainly with mantelpieces, fireplaces, ranges, etc. The spacious premises at 105–109 Fulham Road, S.W.3, afford Messrs. Bingham splendid showrooms for displaying a large variety of mantels, grates, gas fires and gas cookers, kitchen ranges, and independent boilers for domestic supply and central heating, though these subjects by no means monopolize the whole building, and much that is of architectural interest and value is well displayed. Messrs. Bingham announce that they would be greatly complimented by a visit to their showrooms to inspect their large and varied stock, also their hot-water system in use. The firm was established in 1833, and has been for over seventy years in Chelsea. The firm has been awarded seven gold medals at London exhibitions.

New "Relay" Automatic Exchange.

An interesting souvenir of the opening by Sir William Noble, M.I.E.E., engineer-in-chief to the Post Office, of the new "Relay" automatic telephone exchange at Liverpool has just been issued by the Relay Automatic Telephone Company, Ltd., of Marconi House, Strand, W.C.2. The new automatic exchange is situated at the head offices of the "Liverpool Courier and Express," for whose use it has been laid down and linked up with the public services. It is the pioneer newspaper installation of its kind. Not only is every department and indeed every apartment throughout the entire building in instant automatic communication with every other one, but it can also establish equally immediate automatic communication with the private manual switchboard for outgoing and incoming messages. The illustrations in the souvenir include Sir William Noble making the first call on the exchange, and a group comprising Sir William Noble, Mr. A. Burchill, J.P., Mr. C. B. Clay, together with some well-known Lancashire business men and heads of the "Courier and Express" literary and printing departments who attended the opening ceremony.

Waterproof Properties of "Pudlo."

There was an interesting sequel to the demonstration by Messrs. Kerner-Greenwood & Co., Ltd., at the Building Trades' Exhibition, of the testing apparatus which we described in our issue for April 12. At 3.30 p.m. on the last day of the exhibition, in the presence of representatives of the trade papers, and a crowd of interested spectators, a cylinder of waterproofed cement and sand (2, 1, and 5 per cent. of "Pudlo" brand powder), which had been continuously under a water pressure of 300 lb. per square inch for seventeen days, was removed from the machine and broken. The substance of the cement cylinder was absolutely dry, which afforded proof that there had been no penetration of moisture into the waterproofed cement mortar. When it is realized that the pressure maintained during this test was 50 per cent. greater than that required to drive a modern steam locomotive, the waterproofing properties of "Pudlo" brand powder will be appreciated.

Value of Trade Marks.

Messrs. Simplex Conduits Limited, of Garrison Lane, Birmingham, have sent us a copy of a card which is shortly to be issued to an exceptionally large number of architects, engineers, and electrical engineers throughout the world, particularly in Great Britain. It is proposed to carry out the distribution simultaneously with an advertising campaign urging the recognition of the value of distinctive marks on manufacturers' products. The largest electrical concerns in the country have associated themselves with the scheme. The issue of a distinctive mark on whatever product is quite obviously a means of identification, definitely valuable to all concerned with the goods in question, including the manufacturer, the wholesaler, the contractor, and the ultimate user or consumer. The very fact of a product bearing a mark of this description clearly indicates that the manufacturer is willing to be permanently associated with his goods; and to be agreeable to this, it very apparently necessitates at least his manufactures being products of quality —products conforming, or perhaps more than conforming, with the highest claim at any time uttered in their support. The manufacturer fully recognizing his position has perforce to meet the situation by producing goods of such a constant high standard as is never exacted when issuing goods unidentified. Were the

case otherwise the mark could be only the initial cause of being driven from off the market; it would be noted and diligently avoided; it would inevitably become the distinctive mark of the product *not* to be considered. Messrs. Simplex Conduits Ltd. state that the distinctive mark for the identification of Simplex products has been issued largely as the result of numerous instances coming to light where electrical conduit, other than that manufactured by the company, has been supplied against specific requisitions for Simplex conduit. As a safeguard, every length of Simplex conduit now bears a reproduction, in transfer form, of the company's trade mark, which is to act essentially as a guarantee of Simplex origin. Besides ensuring the source of origin, however, the mark also indicates a conduit manufactured from only the highest grade steel, and whose every length is specially inspected and tested for smoothness of bore and accuracy of internal and external diameters. A special process of stoving after enamelling gives a protective covering of exceptional durability which is at once elastic and tenacious, and possesses good insulating properties. The threads are well cut after enamelling and are protected by cardboard caps against damage during delivery.

Yorkshire Builders' London Office.

Messrs. Edwards & Co. (Doncaster), Ltd., of 1 St. Sepulchre Gate, Doncaster, builders and public works contractors, in order to be in closer touch with architects, surveyors, and engineers in London and in the South of England, have established a London branch of their business at Sardinia House, Kingsway, W.C.2, under the management of Mr. George F. Fox. All inquiries will receive attention from this branch, and in future works in London and the South will be under its supervision.

The Cardiff Conference: List of Guests at the Banquet

On Friday evening, June 9, a banquet was held in the Whitehall Rooms of the Park Hotel, Mr. Paul Waterhouse, P.R.I.B.A., in the chair Among those present were the Lord Mayor and Lady Mayoress of Cardiff, the Chief Constable of Cardiff, the President of the Chamber of Trade, the Mayor of Newport, Mr. Gilbert D. Shepherd, Mr. Chas. Coles, Mr. John Phillips, Mr. John Duncan, Mr. Wm. Woodward, Mr. James E. Turner, Mr. D. E. Roberts (President S.W.I. of Engineers), Mr. H. T. Buckland (President Birmingham A. Assoc.), Mr. J. C. Gould, M.P., Mr. Percy Thomas (President S.W.I. of Architects), Mrs. Percy Thomas, Dr. W. Evans Hoyle, Mr. E. T. Hall, Mrs. Evans Hoyle, Dr. Robinson, Mr. Wm. Thomas, Mr. Cecil Brown, Mr. R. J. Webber, Mr. Wm. Gibson (President Cardiff Master Builders' Assoc.), Mr. Fred Lewis (President S.W.B.T. Employers' Federation), Mr. and Mrs. Cook Rees, Mr. W. Rosser, Mr. J. Williamson, Mr. C. Kempthorne, Mr. C. E. Page, Mr. W. T. Lewis and guest, Mr. G. Sanville, Mr. and Mrs. H. Teather, Mr. Arthur Keen (Hon. Sec. R.I.B.A.), Mr. W. T. Plume, Mr. E. S. Hall and guest, Mr. J. Gibson, Mr. J. Hallett, Mr. Hennings, Mr. G. Fraser, Mr. W. G. Lewis, Mr. W. H. George, Mr. H. de C. Hastings, Mr. and Mrs. C. F. Ward, Mr. and Mrs. J. P. Grant, Mr. F. Hooper, Mr. E. C. M. Willmott, Mr. W. G. Newton, Mr. J. H. Worthington, Colonel Cecil Wilson and Mrs. Wilson, Major H. Barnes, M.P., Mr. Ian MacAlister, (Secretary R.I.B.A.), Mr. G. B. Zug, Mr. Sidney Williams, Mr. J. F. Groves, Mr. H. Grayson, Mr. Milburn, Mr. T. Gibb, Mr. K. Thomas, Mr. and Mrs. Llewellin-Smith, Mr. and Mrs. T. T. Rees and Miss Rees, Mr. and Mrs. E. V. Harris, Mr. C. S. Thomas, Mr. W. S. Purchon, Mr. E. and Mrs. Harding Payne, Mr. A. P. Fawckner, Mr. and Mrs. Dunbar Smith, Mr. and Mrs. Ivor Jones, Professor S. D. Adshead (Vice-President R.I.B.A.), Mr. Lennox Robertson, Mr. and Mrs. R. Holt, Mr. C. B. Flocton, Mr. H. Jones, Mr. H. G. Watkins, "Western Mail," Mr. E. Ware, Mr. Jacob Rees, Mr. D. Morgan, Mr. E. Greenleaves, Mr. E. Smith, Mr. J. Ward, Mr. and Mrs. J. A. Hallam, Mr. and Mrs. Alwyn Lloyd, Mr. Francis Jones (President Manchester Society of Architects) and Mrs. Francis Jones, "South Wales News," Mr. Pugh Jones, Mr. T. E. Llewellyn, Mr. A. Lee, Mr. R. H. Winder, Mr. B. Thomas.

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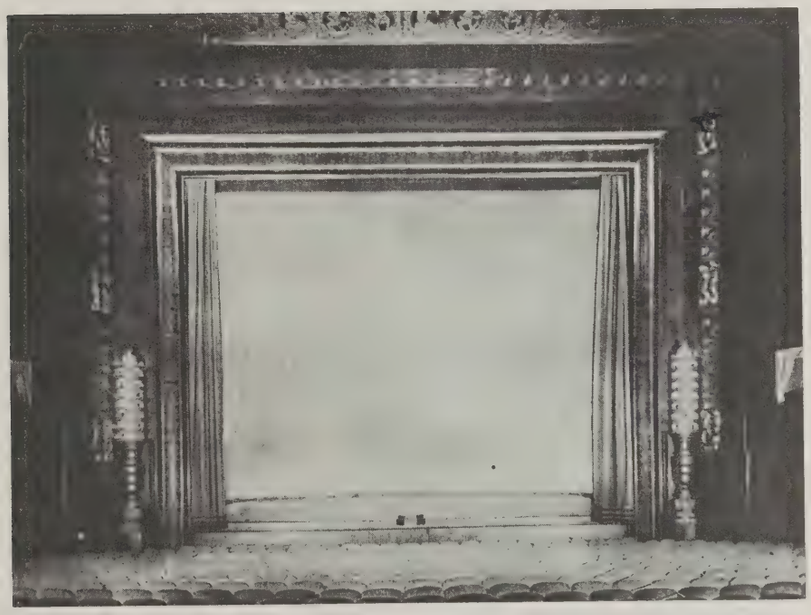
Wednesday, June 21, 1922. Vol. LV. No. 1433

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"



THE NATIONAL THEATRE, BERLIN: STAGE SURROUND.
OSCAR KAUFFMANN, ARCHITECT
(*See Reference on page* 884.)

27-29 Tothill Street, Westminster, S.W.1.

Architectural Details. 28.—A Wall Fountain

Photo: V. & A. Museum.

This fountain, which is of carved stone, is an example of late fifteenth-century Italian work. The height is 7 ft., and the width of the plinth is 5 ft. 7½ in. The sides of the plinth are not completely shown in the above reproduction.

THE
ARCHITECTS' JOURNAL
27-29 Tothill Street, Westminster, S.W.1.

Wednesday, June 21, 1922 Volume LV. No. 1433

The R.I.B.A. Elections

THE election of the new Council for the Royal Institute of British Architects has taken place. There is a change in the composition of the Council—a great change. Of the old Council two of the four Vice-Presidents have not been re-elected, and only four members of the Council have retained their seats. Of the Associate members of the Council none were returned. This is what would be called in common political parlance a sweeping change. It is no secret that the result is due to a block transfer of votes from the members of the old Council to many whose names appear on a list circulated in support of the views of those who hold that the policy of Unification pursued by the old Council is contrary to the interests of the Institute. The first reflection is that the only right of a minority is the right to change itself into a majority, and there appears little reason to doubt that that is what the minority on the Unification Committee have succeeded in doing. The second runs somewhat along the lines of a reflection of the devout Saint Thomas à Kempis, who says in one of his meditations, "Of what avail is it to dispute learnedly about the Trinity, if all the time you are displeasing the Trinity?" Which, under the present circumstances, might be paraphrased, "Of what avail is it to attempt Unification outside the Institute before you have achieved it inside?" Or, if we may convert another quotation to our use, it may be said that "Conversion begins, or should begin, at home." Those of us who hold the majority view have no grounds of complaint against the victorious minority. They had their view: they spread their view: their view prevailed. Let us hope but for a season, and that the new Council, when it addresses itself to the problem that has not been disposed of by the election, may come to see that the course the majority proposed to take is, after all, in the long run, the best course to take.

Happily the question upon which the election was decided is not the only business of the Council of the Royal Institute of British Architects, and a division of opinion on it need not, and we are sure will not, go farther. In the many other interests which the Council has to protect and serve, it goes without saying that the President will receive from the new Council the same loyal support he received from the old. There are many men of distinction upon the new Council who can be trusted to preserve the great traditions which they inherit. The Council is no more provincial than before, and still remains a London Council; but perhaps the result of the election which is most important is the fact that, while the personnel of the Council has been so greatly changed, that of the Standing Committees remains the same. The result is a gulf between the Council and the Standing Committees which will require a little skill to bridge, and the same is true of the Board of Education. The danger to be averted in both cases is that the interest of the Council may be too remote from that of the committees. However, there are no difficulties which application and goodwill will not overcome, and, in wishing the President good fortune in his new year of office, we congratulate him on having at his back a Council whose only difference is rooted in a common desire to preserve the Royal Institute of British Architects in its proud position of pre-eminence in the profession. It is a further matter for congratulation that the constitution provides for the separate representation of the Architectural Association, in view of the fact of the connection between so many members of the old Council and the Association. It would be invidious to single out any person for special regret; indeed, it is only when the list of the old Council is read that one appreciates the distinguished character of its composition.

It would be indeed a grave misfortune, which we are sure will not fall upon the Institute, if electoral vicissitudes should diminish in any way the interest and the services of those distinguished members of the profession who are no longer members of the Council. Rather, we think, will their energies be given to re-binding the severed threads and making closer than ever the connection between the Council, the Standing Committees, the Board of Education, and the Architectural Association, all those bodies through which the will of the Council must be expressed. As for Unification and Registration, every member of the Council and of the Unification Committee, whether in the majority or the minority, pursued the policy based upon his convictions, followed it with sincerity, and expressed it with courage, as his belief upon his knowledge and the circumstances of the case. Such an event as this election may present difficulties, but they are of the nature of the difficulties which were presented by a disciple to Epictetus, and described by that philosopher as being "the most advantageous difficulties he had ever known." It is in that light that we take leave to regard the present situation. The interest of the profession has been stirred by the change in the Council; that interest will continue, and will be a stimulating and creative force.

"The Time to Build"

"The Daily Telegraph" is to be congratulated on admitting to its columns a short series of articles in which Mr. T. P. Bennett has shown very clearly the advantages that would accrue to the business community from a courageous view of the building question. The gist of these articles, which appeared on June 9, 10, and 12, is admirably summarized in a leading article that appeared in the issue that gave the last of the three articles. In the leader, the case is correctly diagnosed: "People are holding back to be sure that prices have touched bottom. That has been the universal tendency in almost every industry, and as long as it prevails there can be no rapid revival of trade, which is mainly a matter of confidence and the effective replacement of hesitation and depression by the sure belief that things must get better and better every day." Lest this progressive betterment might appear to some superficial thinkers to be a very good reason for continuing to hold back, the leader-writer hastens to add the useful fact that "Mr. Bennett has given reasoned arguments to show

that conditions in the building industry may be regarded as having reached a fair measure of stability." Government has ceased to send up prices by competing for labour and materials, transport costs have been appreciably reduced, and all the general expenses, including the rates of wages, have gone down as far as they are likely to fall. What may be called "service installation," such as those for lighting, heating, ventilation, and sanitation, have also come down to a reasonable level; and from all the data he has been able to collect, Mr. Bennett deduces that "the present is the time to put schemes in hand," especially for commercial undertakings, but not exclusively for them. "The Daily Telegraph" leader-writer enforces with much clearness Mr. Bennett's reference to "the extraordinary change which has come over the ideas of the business world as to what is necessary in the equipment of an up-to-date commercial building. Electricity has made lighting quite a new art; an ill-lit building is unbusinesslike from every possible point of view, and a bad scheme of lighting may involve extremely wasteful running costs. The handsome stone-fronted, iron-girdered commercial buildings—shops, warehouses, and factories alike—which are being run up so rapidly in the London streets at the present time, and the foundations of which are driven down so far below the ground-level, represent a wonderful combination of expert knowledge and ingenuity undreamt of a generation or two ago. Power, drainage, water supply, heating, ventilation, lighting, lifts—each has been revolutionized in turn, and among the many elements of the absorbing problem of successful business, that of the perfect adaptability of the premises where the business is carried on, becomes every day of increasing importance. An A1 business cannot be conducted on C3 premises, and the growing realization of this fact should keep the building trades busy whenever industry in general revives." These things were badly in need of being said; and they could not have been said more opportunely, more forcibly, nor in a more influential quarter than in the columns of "The Daily Telegraph," than which no daily newspaper carries more weight among business men. It was time that the public mind was awakened on such issues, and "The Daily Telegraph" and Mr. T. P. Bennett—not forgetting Mr. Gayer, who assisted him—are to be heartily thanked for rendering this important service, not merely to the building industry, but to the business community at large. It is in effect a rousing reverberation of the royal "Wake up, England!" slogan.

Early Closing of Museums

Many complaints have reached us concerning the early closing of museums. It is an inexplicable fatuity thus to shut out those who make the most practical use of such institutions. A case in point is that of the Victoria and Albert, which closes at five o'clock every day but Sunday, when it is open between two and six. Except on Sundays, therefore, the museum is closed at the very hour when the architect, for example, is free to use it, his closing time corresponding to that of the museum. Surely this is a matter that could easily be adjusted. It is of considerable importance that the architect and the craftsman should not be thus ineptly deprived of the opportunity of studying the unrivalled collections of objects of art-craftsmanship for which the V. and A. is famous the world over.

The "Mantle of Soot"

It is a very hopeful sign that satire and ridicule are being employed against the smoke nuisance. These are deadly weapons, and they are being skilfully wielded. Mr. William Harvey hurled them with sure aim when in his recent address to the R.I.B.A. he spoke of the "soot-and-acid treatment of our town buildings," and again when he quietly remarked that "the only buildings which appear really comfortable are those which happen to wear their mantle of soot with dignity." These telling phrases have become "winged words" in the hands of a leader-writer in the "Manchester Guardian," who adds a wise and sympathetic word of his own. In our city architecture, he says truly enough, "line and mass alone have a say in the matter after a year or two of the soot-and-acid treatment"; the acid, of course, being conveyed in the soot, which is heavily charged with it. The Smoke Abatement League is fast gathering powerful friends about it.

R.I.B.A. Election Results

Following are the results of the elections for the Council and Standing Committees of the R.I.B.A. By comparing these results with the list showing the constitution of the Council and Standing Committees before the election, it will be seen that many changes have taken place. The figures given in parentheses show the number of votes secured by the candidates :—

The New Council

PRESIDENT.

PAUL WATERHOUSE.

VICE-PRESIDENTS.

H. D. SEARLES-WOOD (760).
A. W. S. CROSS (751).
GEORGE HUBBARD (704).
C. H. HEATHCOTE (648).

HONORARY SECRETARY.

ARTHUR KEEN.

PAST PRESIDENTS.

SIR REGINALD BLOMFIELD AND MR. JOHN W. SIMPSON.

MEMBERS OF COUNCIL.

Fellows.

C. B. FLOCKTON (861).
SYDNEY PERKS (834).
W. GILLBEE SCOTT (773).
W. E. RILEY (764).
C. LOVETT GILL (744).
G. TOPHAM FORREST (727).
MAX CLARKE (722).
W. W. SCOTT-MONCRIEFF (691).
J. A. SWAN (687).
W. G. HUNT (651).
Major HARRY BARNES, M.P. (648).
HERBERT SHEPHERD (634).
J. ALFRED GOTCH (633).
DELISSA JOSEPH (633).
A. O. COLLARD (625).
HEATON COMYN (622).
Sir EDWIN L. LUTYENS (620).
PERCIVAL M. FRASER (589).

The Old Council

PRESIDENT.

1921 PAUL WATERHOUSE, M.A.Oxon., F.S.A.

VICE-PRESIDENTS.

1919 E. GUY DAWBER, F.S.A.
1919 Professor S. D. ADSHEAD, M.A.
1919 A. W. S. CROSS, M.A. Cantab.
1921 H. D. SEARLES-WOOD.

HONORARY SECRETARY.

ARTHUR KEEN.

PAST PRESIDENTS.

SIR REGINALD BLOMFIELD AND MR. JOHN W. SIMPSON.

MEMBERS OF COUNCIL.

HENRY V. ASHLEY.
Major HARRY BARNES, M.P.
WALTER CAVE.
Sir BANISTER F. FLETCHER, Officier de la Légion d'Honneur.
JAMES S. GIBSON.
W. CURTIS GREEN.
H. AUSTEN HALL.
E. STANLEY HALL, M.A.Oxon.
E. VINCENT HARRIS.
H. V. LANCHESTER
T. GEOFFRY LUCAS.
Sir EDWIN LUTYENS, R.A.
ALAN E. MUNBY, M.A.Cantab.
C. STANLEY PEACH.
SYDNEY PERKS, F.S.A.
W. E. RILEY, R.B.A.
G. GILBERT SCOTT, A.R.A.
MAURICE E. WEBB, M.A.Cantab. D.S.O., M.C.

R.I.B.A. Election Results—*continued.*

The New Council

ASSOCIATE-MEMBERS OF COUNCIL.

. H. Ashford (712).
IGBY L. Solomon (684).
RANK Woodward (665).
Arthur Welford (622)
H. G. Fisher (618).
L. A. Culliford (588).

REPRESENTATIVES OF ALLIED SOCIETIES.

DWARD T. Boardman (Norfolk and Norwich).
RANCIS Jones (Manchester).
AMES Lockhead (Glasgow).
HOMAS R. Milburn (Newcastle).
RIC Morley (Leeds).
Percy Morris (Devon and Exeter).
Rupert Savage (Birmingham).
Percy Thomas (Cardiff).
Edward P. Warren (Berks, Bucks, and Oxon).

REPRESENTATIVE OF THE ARCHITECTURAL ASSOCIATION.

Stanley H. Hamp.

HONORARY AUDITORS.

John Hudson and Arthur W. Sheppard.

The Standing Committees

ART.

Fellows.

. V. Lanchester (839).
r Edwin L. Lutyens (833).
ALSEY Ricardo (721).
. H. Reilly (693).
D. Adshead (675).
Walter Cave (671).
F. M. Simpson (660).
Ralph Knott (650).
A. E. Richardson (650).
William Walcot (605).

Associates.

YRIL A. Farey (928).
. S. Tait (895).
. H. Bucknell (877).
Michael Waterhouse (823).
Percy W. Lovell (800).
Arthur Welford (800).

LITERATURE.

Fellows.

[ARTIN S. Briggs (773).
[ajor Hubert C. Corlette (771).
[. M. Fletcher (763).
[. H. Statham (755).
. Harrison Townsend (755).
Arthur Stratton (754).
D. T. Fyfe (715).
E. Stanley Hall (710).
Louis Ambler (698).
Charles S. Spooner (680).

Associates.

. Hubert Worthington (777).
. Alan Slater (767).
[. Chalton Bradshaw (680).
George Drysdale (611).
C. Cowles-Voysey (584).
W. H. Ansell (574).

PRACTICE.

Fellows.

YDNEY Perks (750).
RTHUR Keen (737).
[AX Clarke (707).
OHN Slater (669).
V. Gillbee Scott (663).
G. Topham Forrest (613).
Delissa Joseph (582).
Wm. G. Hunt (581).
Henry V. Ashley (556).
A. O. Collard (531).

Associates.

[ORACE Cubitt (828).
. Scott Cockrill (753).
. Douglas Scott (712).
Digby L. Solomon (708).
H. V. Milnes Emerson (686).
Herbert A. Welch (662).

SCIENCE.

Fellows.

V. A. Pite (935).
I. D. Searles-Wood (879).
LAN E. Munby (872).
I. Percy Adams (861).
. Elsey Smith (751).
Raymond Unwin (687).
W. E. Vernon Crompton (686).
Francis Hooper (669).
Herbert Shepherd (616).
C. A. Daubney (607).

Associates.

OBERT J. Angel.
ENRY W. Burrows.
OHN H. Markham.
Harvey R. Sayer.
Theodore F. H. White.
Charles Woodward.

The Old Council

ASSOCIATE-MEMBERS OF COUNCIL.

H. Chalton Bradshaw.
Stanley H. Hamp.
J. Stockdale Harrison.
J. Alan Slater, M.A.Cantab.
Michael Waterhouse, M.C.
J. Hubert Worthington, M.A.

REPRESENTATIVES OF ALLIED SOCIETIES.

H. T. Buckland .....Birmingham Architectural Association.
C. B. Flockton .....Sheffield, South Yorkshire and District Society of Architect and Surveyors.
Gilbert W. Fraser .....Liverpool Architectural Society.
J. Alfred Gotch, F.S.A. .Northamptonshire Association of Architects.
A. W. Hennings .....Manchester Society of Architects.
Llewellyn Kitchen ....York and East Yorkshire Architectural Society.
T. R. Milburn.....Northern Architectural Association.
W. T. Oldrieve, H.R.S.A..Edinburgh Architectural Association.
W. B. Whitie .....Glasgow Institute of Architects.

REPRESENTATIVE OF THE ARCHITECTURAL ASSOCIATION (LONDON).

W. G. Newton, M.A.Oxon., M.C.

The Standing Committees

ART.

Walter Tapper, *Chairman;* Halsey Ricardo, *Vice-Chairman;* W. A. Forsyth and Maurice E. Webb, D.S.O., M.C., *Hon. Secs.*

Professor S. D. Adshead, M.A.
Herbert Baker.
Walter Cave.
J. Duke Coleridge.
Alfred Cox.
W. R. Davidge.
Cyril A. Farey.
F. R. Hiorns.
J. J. Joass.
Percy W. Lovell, B.A.Cantab.
Sir Edwin Lutyens, R.A.
Ernest Newton, C.B.E., R.A.
Professor A. E. Richardson.
Professor F. M. Simpson.
Michael Waterhouse, M.C.
W. A. Webb.
Arthur Welford.

LITERATURE.

Henry M. Fletcher, M.A.Cantab., *Chairman;* W. Curtis Green, *Vice-Chairman;* J. Alan Slater, M.A.Cantab., and W. Henry Ward, M.A.Cantab., F.S.A., *Hon. Secs.*

Louis Ambler, F.S.A.
W. H. Ansell, M.C.
H. C. Bradshaw.
M. S. Briggs.
Lionel B. Budden, M.A.
Major H. C. Corlette, O.B.E., R.B.C.
A. T. Edwards, M.A.Oxon.
E. Stanley Hall, M.A.Oxon.
H. Austen Hall.
A. H. Moberly, M.A.Cantab.
S. C. Ramsey.
C. E. Sayer.
H. H. Statham.
Arthur Stratton, F.S.A.
C. Harrison Townsend.
P. Leslie Waterhouse, M.A. Cantab.
J. Hubert Worthington, M.A.

PRACTICE.

John Slater. B.A.Lond., *Chairman;* T. R. Milburn, *Vice-Chairman;* Horace Cubitt and Herbert A. Welch, *Hon. Secs.*

Henry V. Ashley.
Max Clarke.
G. Scott Cockrill.
A. O. Collard.
A. W. S. Cross, M.A.Cantab.
H. V. M. Emerson.
G. Topham Forrest, F.G.S.
Francis Jones.
Arthur Keen.
G. H. Lovegrove.
C. Stanley Peach.
Sydney Perks, F.S.A.
Rupert Savage.
J. Douglas Scott.
Digby L. Solomon, B.Sc.
Harry Teather.
W. Henry White.

SCIENCE.

H. W. Burrows, F.G.S., *Chairman;* H. D. Searles-Wood, *Vice-Chairman;* J. E. Franck and H. A. Saul, *Hon. Secs.*

H. Percy Adams.
Robert J. Angel, M.Inst.C.E.
R. Stephen Ayling.
Felix Clay, B.A.Cantab.
W. E. Vernon Crompton.
C. A. Daubeney.
G. Leonard Elkington.
E. Fiander Etchells, A.M. Inst.C.E.
Francis Hooper.
J. H. Markham.
Alan E. Munby, M.A.Cantab.
S. B. Russell.
Herbert Shepherd.
Professor R. Elsey Smith.
Raymond Unwin.
T. F. Hansford White.
Charles Woodward.

The Nebraska State Capitol

BERTRAM G. GOODHUE, Architect

THE Nebraska capitol, which is now being erected from the designs of Mr. Bertram G. Goodhue, marks a radical departure in American state house architecture. The plan was secured through a series of competitions held under the auspices of the American Institute of Architects. Three Nebraska men were selected in a preliminary competition in which the economic and political aspects of the problem were considered as well as architectural requirements. Seven firms of national reputation outside Nebraska joined in the competition, which resulted, in June 1920, in the selection of Bertram G. Goodhue of New York as the architect for the commission.

For a year after the adoption of the Goodhue plan it was studied and restudied, not only by the architect and his staff, but by the commission and by the public. Some changes have been made, but the essence of the first design remains in all its original simplicity and dignity.

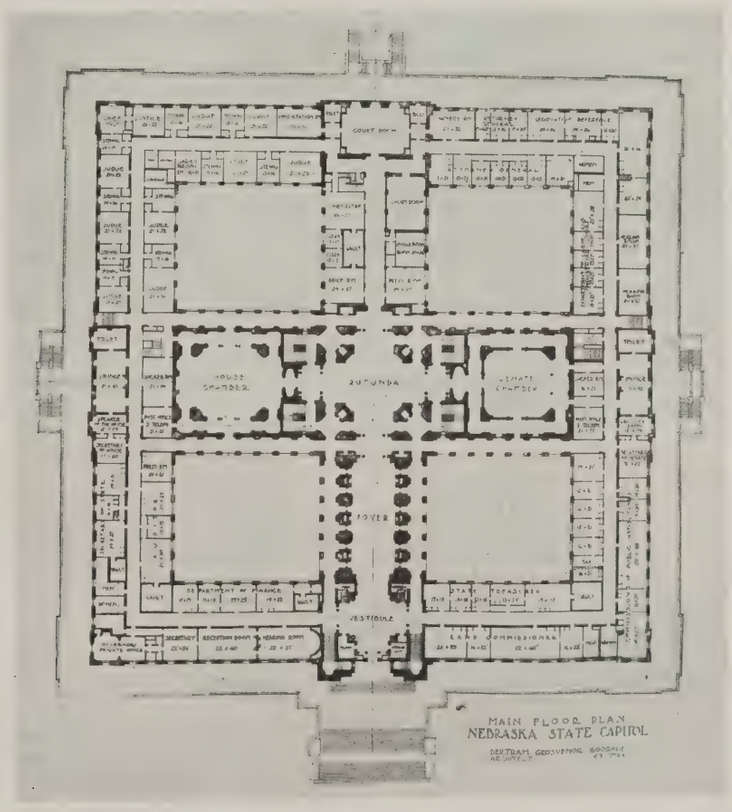
The capitol consists of a building approximately 440 ft. square. It will have a basement below the grade, a first floor forming a terrace entirely around the building, and a main floor bringing the parapet to a height of 51 ft. from the ground level. The chief feature of the structure is a tower rising from the centre to a height of 400 ft. This tower, surmounted by a colossal figure called "The Sower," will be seen, it is estimated, from thirty to forty miles from every direction. The tower will be 80 ft. square at the base and will taper only slightly as it rises, a square, severe shaft pierced on each of its four sides by long continuous windows and terminating in a graceful dome of coloured or gilt tile. The object of the architect in making this feature was to furnish the comparatively flat state of Nebraska with an elevated building which could be at once an object of beauty and a source of inspiration.

THE MAIN ENTRANCE.

The great archway is 25 ft. wide by 50 ft. high. On either side the arch is buttressed by pylons, on the two outermost of which are two low-relief panels, the two inner ones terminating in engaged figures of tremendous scale, representing the four attributes of the law: Wisdom, Justice, Power, and Mercy.

But while this architectural feature will distinguish the building and make it different from all other capitols, it is also utilitarian to the very top. The lower portion of the tower will contain the main rotunda. Above the roof it will carry a dozen floors of offices, housing many of the state departments and providing room for an indefinite expansion of the storage space for the state library. At the top, underneath the dome, will be located the war trophy room. This will be a magnificent apartment with space to store in permanent safety the battle flags and other relics left over from the Civil War, the Spanish and Philippine wars, and the recent conflict.

The basement and first floor will house the service features and many of the state departments. The chambers



NEBRASKA STATE CAPITOL.

BERTRAM G. GOODHUE, ARCHITECT.

which distinguish such a building will be found on the main floor. Entering from the north by a broad flight of stairs, the visitor finds himself in the hall of state, a vaulted apartment approximately 50 ft. high, and containing niches for statues and spaces for inscriptions and mural paintings. At the left will be a series of rooms for the governor. Passing directly to the centre of the building and standing in the rotunda the visitor will have at his right a well-designed senate chamber and at his left a somewhat larger apartment for the house of representatives. In front he will see the doors leading to the supreme court rooms with the state library immediately above.

Four courts opening to the sky admit light and air to the interior. The arrangement is such that every office in the

EAST AND WEST ENTRANCES.

These are identical in form, the only difference between them being the sculpture. The entrances proper lead into the first floor, on each side of which are stairways leading up to the terrace. The three great arched windows light, in the one case, the Senate Lounge and, in the other, that of the House of Representatives.

structure opens either upon the outside or upon one of these courts. The library and the chambers of legislation are lighted by clerestory windows. Even the rotunda, which in practically all capitols must be illuminated artificially, receives direct light from the windows cut into the tower as it emerges from the roof. The feature of the design is that it covers so much ground and has so large a capacity without requiring artificial lighting in any of the departments.

The style of architecture employed is simple and dignified. It departs from tradition, but does not become futuristic. Nothing is employed, in fact, but well-established forms. Simplicity is the keynote. Such criticism as has been offered deals with the severity of the lines. Mr. Goodhue has been bold and original, but has not adopted a feature that can be called fantastic or experimental.

The material is stone of a rather light buff tone. No engineering problems of any difficulty have been encountered. Thirty feet below the surface a bed of Dakota sandstone is encountered. Piers at intervals of 16 ft. will be sent down through the clay and sand formation to this rock, and no danger of settling need be felt even under the great tower, which is the only portion that puts unusual stresses upon the foundation walls. The tower itself will be of steel construction with wind bracing to give it security.

The building will be enriched by sculpture, painting, and vaulting of coloured and gilt tile. The figures over the main entrance, representing Wisdom, Justice, Power, and Mercy, have already been modelled by Lee Lawrie, to whose hands has been entrusted all the sculpture for the completed building. Inscriptions drawn from the great storehouse of the world's wisdom will be carved on the walls. Space will be left for mural paintings, but these will not be included in the present work of the commission. The law calls for the erection of the building for five millions of dollars without furnishing or without the purchase of additional ground. The new capitol is to stand on the site of the old one. It will be the third state house to be erected on the grounds since Lincoln was made the capital when the state entered the union in 1867.

Nebraska State Capitol: The Foyer

Bertram G. Goodhue, Architect

This great hall leads from the vestibule directly to the central rotunda beneath the tower. Its ceiling is a groined vault of coloured and gilt tile, of which the apex is 50 ft. from the floor, the hall itself being 80 ft. long by 30 ft. wide. On the walls beneath the semi-circular windows of the clerestory are six panels for mural paintings relating to the history of Nebraska. The piers supporting the vault are of sheathed marble. The hall is separated from the central rotunda by a screen supported by marble columns and providing, on the floor above, a convenient means of passage between the Chambers of the House and the Senate.

THE LIBRARY.

ONE OF THE INTERIOR COURTYARDS.

HOUSE OF REPRESENTATIVES.

SENATE CHAMBER.

NEBRASKA STATE CAPITOL. BERTRAM G. GOODHUE ARCHITECT.

The International Theatre Exhibition—II

By GORDON H. G. HOLT

AS adumbrated in the first article on this exhibition, published last week, I meant to set forth various types of modern stage settings, but the great courtesy shown by the organizer of the exhibition (Mr. Martin Hardie, Keeper of the Design and Illustration Department, South Kensington Museum), makes it possible to give another series of photographs bearing directly on the theatre itself. Under the circumstances, it is as well to beat the iron while it is hot.

By good luck, Fig. 1, one of the new photographs to hand, clearly explains Figs. 8, 9, and 10 in last week's issue, of a circular theatre by Oskar Strnad. It illustrates still further the meaning of those eight spiral staircases dotting the periphery of the inner circle (shown on the first-floor plan), for here are distinct means of controlling what is meant to be an especially effective means of lighting. Of course, one's sympathy does go to the poor fellows whose job it is to play the various projectors on the scene—think of the cramped space at their disposal, of the heat and botherization of their lofty job, of the awkward way to negotiate before they reach their station! But there it is.

Another point made clearer is that the impression created by the choir-singing—perched, let it be remembered, in the roof—must be intensified by its central and high position. Those celestial voices, as they fall down upon the audience through the peplum, must have by then a peculiarly sweet or solemn or eerie timbre, and it is by the forethought given to such subtle means, and by the study of such details that hitherto undreamt-of effects can be secured, because a play can then be invested with a totally new dynamism and completeness.

A word of praise should be given in connection with the drawing itself. It is a spirited drawing, it shows great regard for significant shapes, an appreciation of chiaroscuro, and a decent sense of the dramatic; a few structural lines in ink as a skeleton, and the rest filled with crisp charcoal work, was all that was needed. It should be studied as a specimen of effective draughtsmanship.

Figs. 2 and 3 are the plan and section of the theatre for the Congress of the Labour Union at Cologne in 1914, of which a photographic view of the entrance was shown in last week's article. The plan is interesting and simple to a degree. With a theatre of that character, no grand staircase was needed, there being no dress circle or gallery. All one has to do is to walk straight in, get one's ticket, turn either to right or left, go up one flight of steps, leave coat and hat in the cloak-room on the side, and make for the stalls. The cloakrooms to the pit flank the entrance. The bar, a very important adjunct anywhere, but an indispensable one in Germany, is duplicated, and welcomes the thirsty playgoer without any diffidence. The stage is large, the orchestra well hidden, and the artists are adequately housed and can reach the stage in a few seconds.

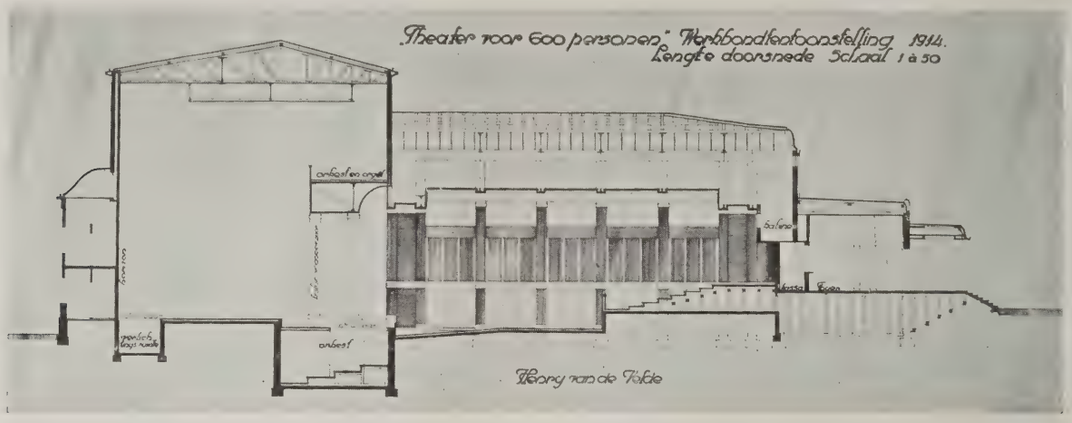
Last week I had occasion to refer to Hans Poelzig's partiality for stalactite architecture when dealing with his design for a Volkstheater at Salzburg. That this is no mere flash in the pan of his idiosyncrasies, as it were, is proved by his treatment of the auditorium to his Grand Theatre at Berlin, the main elevation of which has already been illustrated. Figs. 4 and 5 show actual examples of such stalactite treatment, only in this case a certain formality keeps it within measurable bounds. This is decidedly

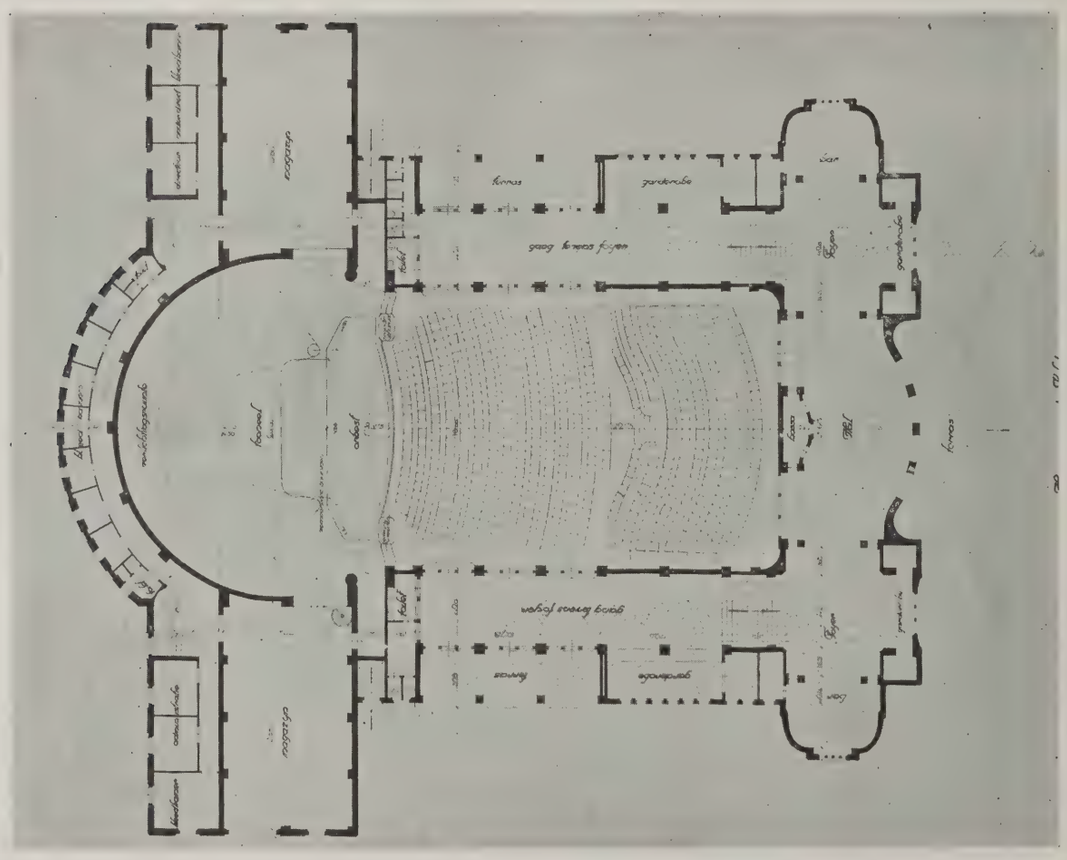
1.—DESIGN FOR A CIRCULAR THEATRE BY OSKAR STRNAD (AUSTRIA): VIEW OF STAGE.

more akin to the lacework of the tympana in the Patio de las Muñecas of the Alcazar at Seville, where the loose rhythm of Andalusian Gothic ornament reached its height. Poelzig's stalactites are more regular, but the sequence of their happening is a trifle irritating. As likely as not, an auditorium of this kind in England would so disturb the audience as seriously to jeopardize the smooth running of the play; but the more easily dragooned and therefore more docile German crowd is not so put out. In fact, it amuses them, as soon as the lights go up again, to look up and allow their mind to go and nestle in all these funny little nooks and corners, where they can further dwell upon the "passions, pleasures, fears, and affections of men."

This artist's ceaseless yearning for new effects, for the startling expression of a simple idea, is again in evidence in Figs. 6 and 7, the latter exhibiting a pillar of light of excellent design. The quality of its disposition is indeed charming. A thing like that is bound to be noticed and remembered. The wall treatment is rather unusual and effective; those very slight arrises are made the utmost use of, and prepare the visitor for the more ebullient forms displayed on the wall and ceiling of the auditorium. The mode of lighting the foyer (Fig. 6) is admittedly original, but the persistent gloom pervading the lower part thereof would not be considered an attraction over here.

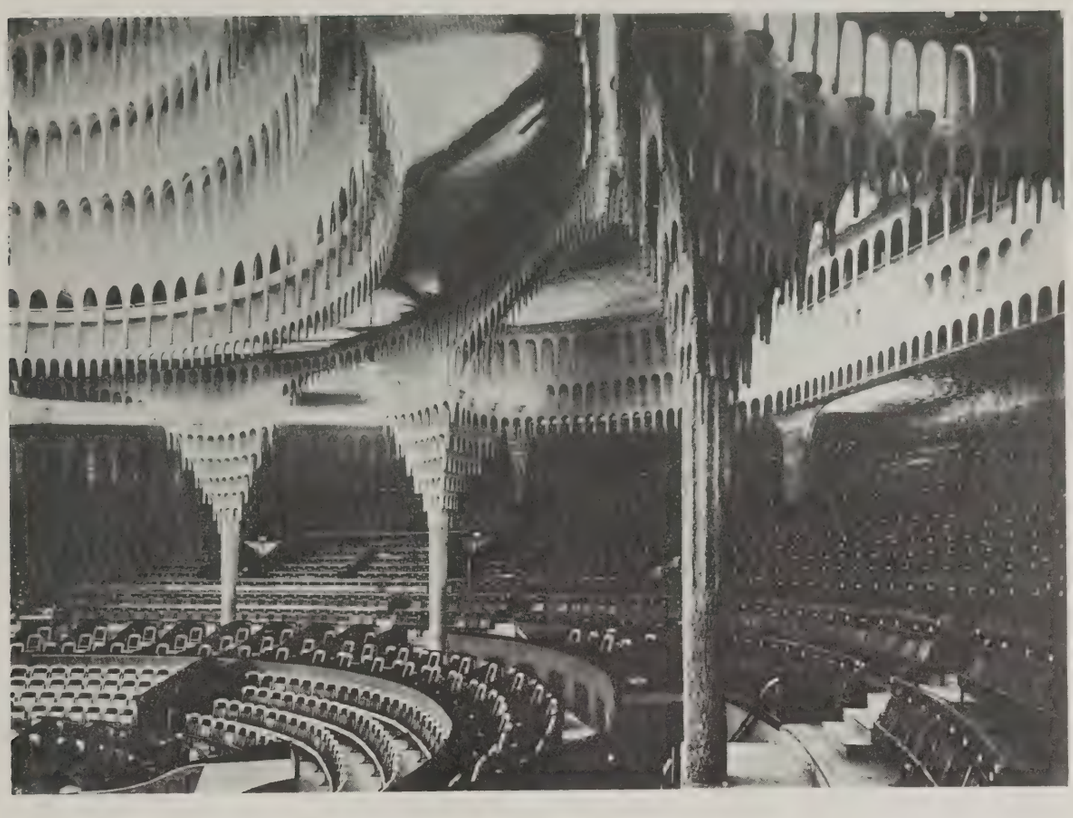
In Fig. 10, which depicts the main façade to the National

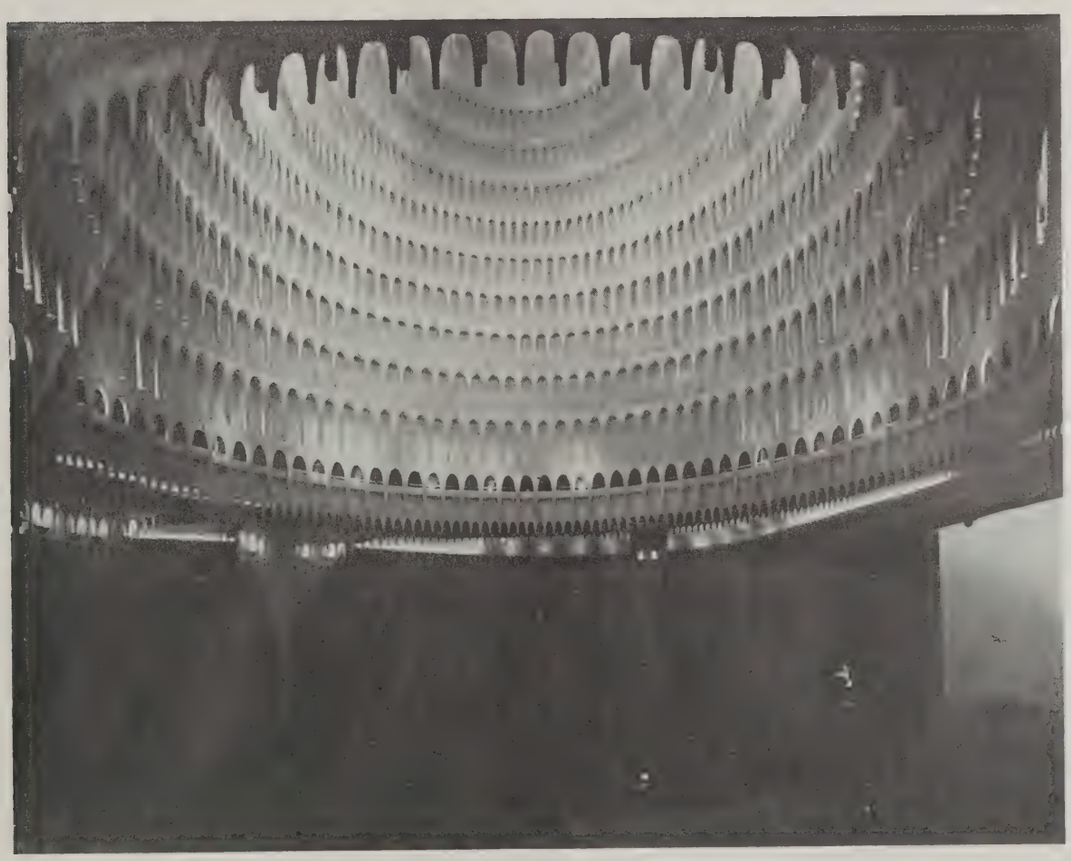




2 and 3.—COLOGNE THEATRE (1914): GROUND PLAN AND SECTION.

VAN DE VELDE, ARCHITECT.





4 and 5.—THE GRAND THEATRE, BERLIN: VIEWS IN AUDITORIUM
HANS POELZIG, ARCHITECT.

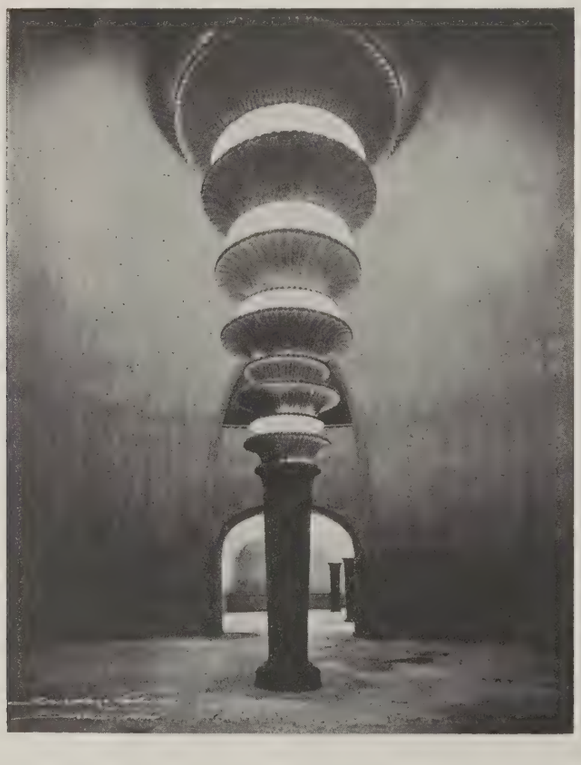
Theatre at Berlin, the reader will be able to see how the central portion (shown last week) is related to the whole elevation. It has a somewhat severe aspect, but all the parts of the building hang well together and are expressed without any nonsense or hesitation. Fig. 11 will give an idea of the interior. Calls have again been made upon the usual Teutonic ingeniousness in the treatment of the upper tiers of seats, but the flat ceiling is not happily related to the rest of the auditorium. The stage opening, illustrated on page 871, is well proportioned, and with this style of decoration the large lamps on either side of it look well.

6.—GRAND THEATRE, BERLIN: FOYER.

Most visitors to the exhibition are puzzled by two extraordinary-looking models of theatres by W. Luckhardt, another German architect. These I have decided to include, as a possible provoker of mirth, for they add the spice of their seeming incoherency to the more solid matter already reviewed. I have so qualified their chief character because there may be just an outside chance that they are not mere nonsense, although the number of those able to probe their meaning must be very small! That such artistic legerdemains should ever be conceived is puzzling to a normally constituted Anglo-Saxon mind, but I do not think there is anything very extraordinary about a German mind putting forward such a medley of shapes to express the ideas which, for the time being, sway it into such a state of mental jugglery. It is serious and comic all at once. It reminds one of Treiher and Wilddiebe's "Horus sapiens cordialis medoc L," or of those amazing interiors by W. Kreis, actually carried out in Berlin and the Rhineland—futurist conceptions of a turgid brain. Apparently Luckhardt seeks to get in tune with the ideas of Haeckel, but as far as I remember not even in Chapter xviii of his "Riddles of the Universe" does Haeckel preach the gospel of such metaphysical obscurantism.

Fig. 8 shows a large slug, painted a terra-cotta colour on its aggressive or redundant side, and blue on the concave surface, which is also the main elevation. There is an outside chance that the doorway is on the left. What the piling-up of all those Bologna-like turrets is all about is a complete mystery.

The cross between a cathedral and a vast prison, shown in Fig. 9, is another puzzle. Where can the auditorium be, and where is the stage, and where do the people go to? Does anyone guess?



7.—GRAND THEATRE, BERLIN: SMALL ENTRANCE HALL.

8 and 9.—MODELS OF THEATRES. BY W. LUCKHARDT.

THE MAIN FRONT.

THE AUDITORIUM.

10 and 11.—THE NATIONAL THEATRE, BERLIN. OSCAR KAUFFMANN, ARCHITECT.

Co-operation between Architect and Craftsman

The relationship that should exist between the architect and the craftsman is adumbrated from two different points of view in the following communications from Mr. C. F. A. Voysey and Mr. Halsey Ricardo.

WHAT kind of architect and what kind of craftsman are we to refer to? Is it the commercial architect, who pockets fees for drawings that are supplied to him by the manufacturers, or the architect who is so much an artist that he will not forgo the honour and pleasure of drawing every detail of his building? Is the craftsman the trades unionist who gives as little as he can for the utmost he can get, or is he the craftsman who delights in his work and can be trusted to do his best whatever it may cost him?

Whichever kind or quality of craftsman we have to deal with, it should be the great concern of the architect to make his drawings as clear and as accurate as he can and with the primary object of showing the craftsman what is intended to be done. It matters little whether or not the building owner understands the drawings. Indeed, it is often better if he cannot understand them. It is high time that we all gave up making academy and catch-penny drawings. The public should select its architect as it does its doctor or solicitor, by knowing something about them and their work beforehand. And then there would be no necessity for fraudulent drawings and deceptive models. Nor should we be crying out for registration and hall-marking.

Would it be fair to stipulate with the doctor or the lawyer that their fees would only be paid if their advice was approved? Yet this is the usual treatment the poor architect receives. We have wandered rather from the subject of the relation between the architect and the craftsman, which should be of the most cordial character.

Suppose an architect engages the help of an acknowledged sculptor and says to him, here is my full-size detail for the panel I am asking you to fill. But I respect your capacity and wish you to feel quite free to do what you yourself feel to be best; then if the sculptor feels utterly out of tune with the architect and goes his own way, the harmony of the building must be broken. So it may be postulated that in such a case it is the duty of the sculptor to decline the commission, or endeavour to carry out the fundamental ideas contained in the architect's detail.

There are many, I am sure, who will hold the exact opposite view. Be that as it may, I readily admit my deep indebtedness to many and many a craftsman with whom I have come in contact, who have taught me that which I could not have otherwise learned. Furthermore, the craftsman may be encouraged by being consulted by the architect. At least it implies confidence, and confidence encourages effort and self-respect. Every man does better when he feels he is being relied upon.

Too little attention is given in architectural training to the question how to get the best from those whom we employ. The conduct of the architect towards contractor manufacturer, traveller, and workman, is of very great importance; and to me the argument that such experience is not to be attained in the architectural schools is a serious charge against them as a system of training. But this reflection leads us to morals and manners, which are not very suitable subjects for debate, and as they concern the co-operation of architect and craftsman, there is little or nothing for me to say. Still, I would like to ask, was there ever a time when the best of our modern craftsmanship was better done, or a time when there was so little of the best to be seen?

The power to produce the best is still with us. The desire for it was never less. Beauty and Truth have eloped, and in their place we have the cinematograph and the gramophone, so here I will end my jazz remarks.

C. F. A. VOYSEY.

The ingredients of a piece of architectural work are three—the designer, the craftsman, and the machine. Really there are four—there is the man who pays the bill and who in most cases, might be designated as the moderator. But for our present purpose he does not appear.

The machine is there to do the slavish, tedious work—fetching and carrying, preparing the concrete, mixing the mortar, slicing the deals, ploughing, tongueing, and planing the floor boards, running the necessary unobtrusive mouldings, and so forth. One keeps a tight hand on the machine because the ideal in one's building is that wherever the eye rests on it, it meets with a human response, and the machine, of course, can't give that.

The designer is somewhat in the position of the conductor of an orchestra which is playing one of his compositions. Each member of the orchestra has his allotted contributory score, to which he must pay strict attention, both as to accuracy of intonation and of time. But the success of the result depends on more than this, otherwise the effect would be merely mechanical; unless the spirit of the composition is grasped by each individual player and impregnated with his conscious co-operation, the result must belifeless.

In architecture the help of the craftsman amounts to much more than this. The measure of his help depends upon his interest in his part, and that depends on his appreciation of the purpose of the architect and the architect's appreciation of his qualities and the material he has to handle. The bricklayer claims discretion in the way he chooses and lays his brick, but he likes a recognition of the taste and skill with which he has done it. So with the carpenter and joiner, and, though it may seem a bold thing to say, with the plumber. But their scope is naturally limited, subordinated to the general requirements of the building. With the mason we reach a higher plane and deal with the craftsman in the "superior arts." The relation is in direct ratio with the architect's sympathetic knowledge of the craftsman's ideals, and the capabilities of the materials to be treated.

The architect can't have a working knowledge of every craft, of course; he acquires, as best he can, a knowledge of what has been done by masters in that craft, and he learns therefrom that a living craft is a developing one responding to the conditions and needs of the period in which it is exercised. The more the architect recognizes this, the freer hand will he give to the craftsman to exhibit his individuality, in the confidence that the latter will enter into sympathetic co-operation with the architect's aims for his building.

The good craftsman cares for the material under his hands; he is loath to waste any part of it; he wants it to show itself off to the best advantage; he knows that this can only be by due friendship and alliance with the general scheme and its immediate neighbours, and he is ready to make such sacrifices as may be needed for that end.

As I said at the outset, the architect's desire is that wherever the eye should light and rest on his building it should meet with a human response, and that response should indicate the craftsman's delight in his invention and pride in the dexterity of his hand.

HALSEY RICARDO.

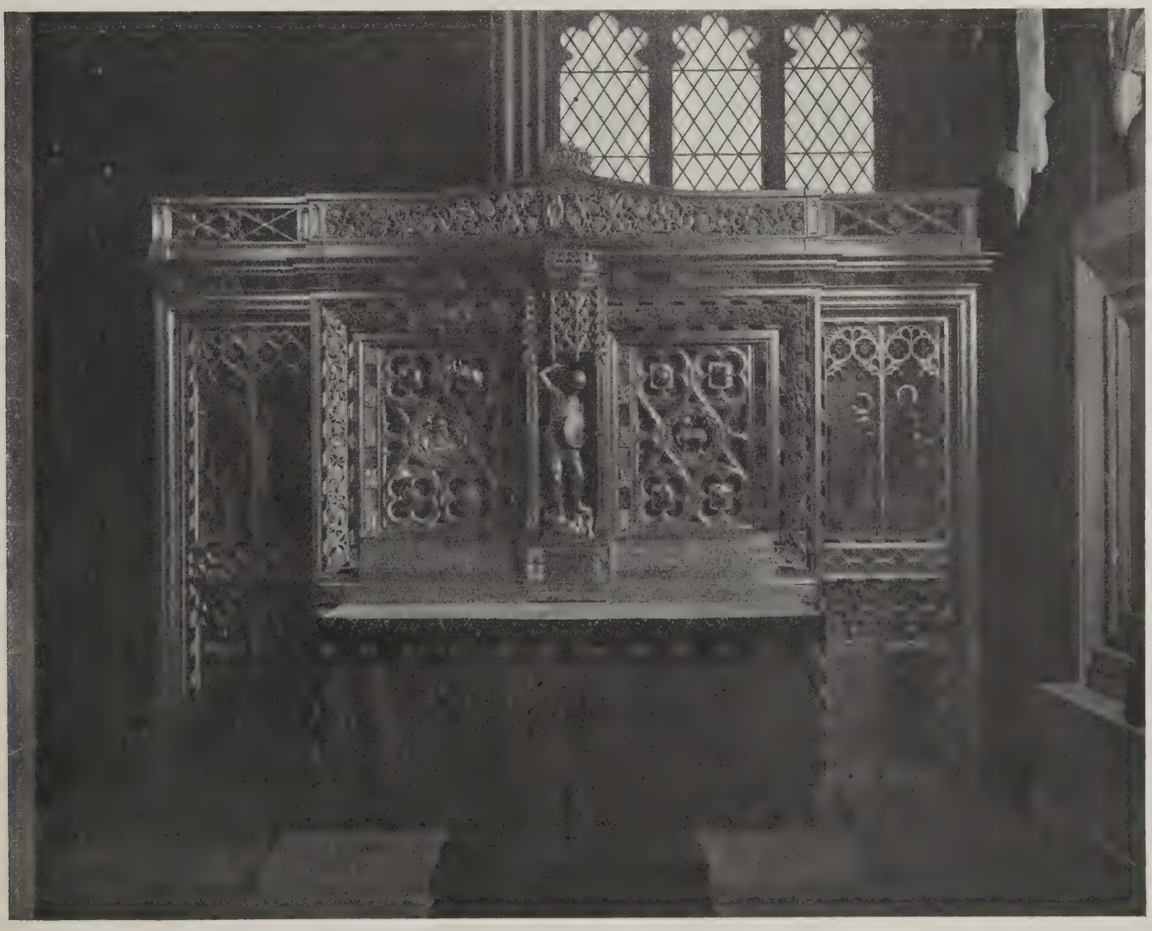
Some Recent Church Interior Details at Edinburgh and Greenock

H. O. Tarbolton, F.R.I.B.A., Architect

ILLUSTRATED here are some views of the new morning chapel of St. Paul's (Episcopal) Church, Edinburgh, and e new chancel screen in St. John's (Epispal) Church, Greenock. These have just en completed from the designs of Mr. H. Tarbolton, F.R.I.B.A., who has done a od deal of modern ecclesiastical work. The morning chapel in St. Paul's urch has been erected as a war memoal, and a portion of the south aisle, gether with an unused porch, has been propriated for the purpose. The chapel nctuary was obtained by forming an ch between the aisle and the porch, and e main features consist of an altar and redos, a stone-built memorial tablet ntaining the names of those members the church who died on active service, d a parclose screen at the west end of e chapel. Oak canopies between the o eastmost nave piers will mark the rth boundary of the chapel, and will erected at an early date. The reredos nsists of a wood altarpiece decorated in colour, with side wings containing traceried panels. The central feature of the altarpiece is a carved and painted figure of St. Michael within a canopied niche, with deeply sunk panels on either side, bearing the emblems of the Passion. Paintings representing incidents in the lives of "The Warrior Saints"—St. Eustace, St. Longinus, St. John Gualbert, and St. Adrian—fill the panels on either side. The memorial tablet is of Bath and the sanctuary arch of Cullaloe stone. The screen is of British oak, with carved and painted shields containing various symbolical devices.

The chancel screen at St. John's Church was erected this year as a memorial to a deceased member of the church. It is entirely of British oak, toned to a grey colour, and portions of it are decorated in gold and colour. The shields are carved in low relief, and the emblems are coloured. The cross is superimposed on the tracery of the central bay, and the symbolical devices, which consist of the Chalice, the Pelican, The Lamb of God, and the Lantern, are in relief and coloured.

At both churches the decoration in colour was carried out by Mrs. E. S. Lumsden, of Edinburgh; and at St. Paul's Church, Edinburgh, the stone caps on either side of the sanctuary arch were modelled and carved by Mr. Thos. Beattie, Edinburgh. The contractors associated with the work were as follows: St. Paul's (Episcopal) Church, Edinburgh: Thos. Millar & Co., Leith (contractors for structural alterations, stonework, and wood-block flooring); Scott, Morton & Co., Edinburgh (supply and carving of reredos and screen and special carved woodwork); Allan and Sons, Edinburgh (memorial tablet); McArthur Bros., Edinburgh (general decoration). St. John's (Episcopal) Church, Greenock: Scott, Morton & Co., Edinburgh (general contractors); Messrs. Scott, Morton & Co. also suppled the oak work, and executed the carving to the designs of the architect.



REREDOS IN THE MEMORIAL CHAPEL, ST. PAUL'S CHURCH, EDINBURGH.

MEMORIAL CHAPEL IN ST. PAUL'S CHURCH, EDINBURGH.
H O. TARBOLTON, F.R.I.B.A., ARCHITECT

H. O. Tarbolton, F.R.I.B.A., Architect

The Morning Chapel in St. Paul's Church, Edinburgh, has been erected as a War Memorial, and has been obtained by using a portion of the south aisle and the space of an unused porch. The main features of the chapel consist of an altar and reredos, a memorial tablet, and the parclose screen illustrated above. This screen is of British oak, and has carved and painted shields containing various symbolical devices.

Modern Ecclesiastical Architecture. 19.—Memorial Screen, St. John's Church, Greenock

H. O. Tarbolton, F.R.I.B.A., Architect

The chancel screen at St. John's Church was erected this year as a memorial to a deceased member of the church. It is built of British oak, toned grey, and portions of it are decorated in gold and colour. The symbolical devices which can be seen on the cross consist of the Chalice, the Pelican, the Lamb of God, and the Lantern. These are coloured in relief. The shields each side of the cross are also in relief, and the emblems are coloured.

Correspondence

Fire-resisting Construction Vindicated

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—In your issue for May 17 I read a letter from "Reader," in which exceptions were taken to some of the statements made by me regarding the fire in Chicago on March 15 in which serious damage was done to portions of the Burlington building.

I enclose herewith a page taken from the May Journal of the Western Society of Engineers, Chicago, Ill., which contains a synopsis of a paper presented to that Society by Mr. Chas. E. Fox, the architect for the building. You will be interested also in the second clipping, an advertisement of a fireproofing company containing a picture of the Burlington building taken the day after the fire. I have also arranged to have mailed to you a copy of an architectural journal published in Chicago, which contains an article by Mr. Fox, in which is given a complete account of the damage done by the fire, the heat on the various floors, etc., together with suggestions for improving the fireproofness of fireproof buildings.

Your correspondent who signs himself "Reader," persists in believing that the buildings were new. The Burlington building was erected and occupied in 1912. That may be new for Europe, but it is old for the United States. We do not call a ten-year-old building new.

It was the only modern building injured. On a block across the street were a number of low buildings, the newest one of which was old twenty years ago. They were built with thin brick outer walls and wood interiors. They were of the type known in the language of firemen as "firetraps." They were occupied by lines of business classed as hazardous. In one of them some incendiary started a fire, from the best evidence obtainable, on a night when a strong wind was blowing towards the west. Burning embers were carried by the wind across a street 80 ft. wide and broke the windows in the Burlington building on several floors. The highest building in the block in which the fire started was seven stories, and some were but two stories high.

The investigations by the insurance and other interests referred to by your correspondent have been completed and the reports issued. They show that the fire was communicated from floor to floor of the Burlington building by flames lapping from window to window and not throughout the interior. Firemen were able to go up to the roof of the building during the fire by means of the stairs surrounding the elevator enclosure.

There was a standpipe in the building, but unfortunately it was in the office space and was not in the enclosed elevator (lift) shaft. No one had anticipated such a fire, and the location of the standpipe within the office space on each floor was thought to be all right. Had it been in the elevator shaft there would have been an opportunity to have connected hose to it on each floor, and then the fire could have been fought on each floor.

The consensus of opinion of the underwriters and all other interests is that the windows were the weak place. Even Achilles, we know, was vulnerable in a vital place, and experience after all is the best teacher though she holds a dear school. The underwriters discussed the fire at the recent annual meeting, and a committee is now engaged on a study of the question of window protection for buildings so constructed that the structural framework is rightfully entitled to be called fireproof.

Here in the United States the fire is regarded as a vindication of the style of construction called fireproof, and it is conceded that the Burlington building, the only fireproof building in the way of the fire, and the only modernly constructed building that was damaged in the fire, stood as a barrier in the way of the flames and saved Chicago a conflagration that might have cost several billions of dollars.

The Burlington building was designed to ultimately contain twenty-one floors. Up to the present time but sixteen floors have been completed, the sixteenth being merely an attic story under the roof and used for storage purposes. In my first letter the amount of damage stated was that caused to the Burlington building alone. It was the damage caused to a modern building, and was but a small fraction of the sensational amounts sent out by the public press. The total loss in the old "firetraps" was a trifle more than that in the Burlington building, but all the losses, in "firetraps" and fireproof buildings, now that we have all the facts, will not reach £800,000, which is something much less than the seven to eight millions sterling reported in some English papers.

The difficulties encountered in fighting fires in high buildings causes us to require all high buildings to be of a high grade of fire-resisting construction. It is not uncommon in this country to have offices gutted by fire, and tenants on floors above and below crowd the floor and interfere with the firemen in their anxiety to see the fire, not worrying at all about the building being in danger. The fire in the Burlington building would not have gained any headway had the fire occurred during the day when the tenants were at their desks.

ERNEST MCCULLOUGH.
Associate Editor of "The American Architect."

[The paper read by Mr. Chas. E. Fox before the Western Society of Engineers describes the effect of the fire, and in the course of the synopsis from the Journal of the Society, sent us by Mr. McCullough, it is stated that "the fact that this fireproof building stood in the path of the flames in all probability prevented the spread of the disaster, which might very conceivably have equalled the great Chicago fire of 1872." The examination of the building shows some very desirable types of construction. The steel structure was not damaged, and after the finish is repaired the building will be safe for use again. The steel work was protected by concrete, and this further protected by an envelope of hollow tile. All the stair and elevator openings were closed off, and the fire actually confined to the separate floors, so that there really were six separate and distinct fires on as many floors. The firemen used the stairways throughout the fire, and were able to work in them unhampered by the flames. This retarding of the fire undoubtedly had much to do toward reducing the losses that were sustained Were it possible to adequately protect window openings, such fires would not occur. This fire was communicated from the block across the street, and only damaged the six upper floors. Had the wall on that side been blank no damage to the building would have resulted, but an office building must have windows. Metal sash glazed with wire glass only served to retard the flames for a time, and then failed. Probably the most important lesson learned from the study of this fire is that some attention should be paid to the condition of the surrounding buildings. The structures in the burned area were all old, and many of them would be classed as hazardous. When the fire once started there was little to stop it. The owners of high-grade buildings in the midst of such areas should have the right to inquire into the conditions existing in neighbouring structures."

The advertisement enclosed by Mr. McCullough contains a striking illustration showing the Burlington building, on the day after the fire, standing beside the ruins of the adjoining buildings. The advertisement also gives extracts from "The Chicago Tribune," which reports Mr. Fox to have said that "The steel skeleton of the building, imbedded in concrete and covered with hollow tile, was not hurt, even in the path of the fiercest blast. Some of the tiles cracked off, but that was all. Floors were damaged slightly, in some offices not at all. We can have it ready for use in ten days, and the interior completely rehabilitated in three weeks." At the time of going to press the architectural journal referred to by Mr. McCullough, containing a complete account of the fire, etc., by Mr. Fox, had not come to hand.—Eds. A.J.]

Architects in Popular Literature

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—One might almost be tempted to infer from Mr. John Galsworthy's letter in your issue for May 31 that the word "architect" has crept into the pages of "Martin Chuzzlewit" by sheer accident; that the apotheosis of Pecksniff at the laying of the foundation stone of the wonderful edifice, designed by someone else, is nothing to do with the story; that, in any case, the reader is not supposed to remember anything about it; and that, if he does so, he should never mention the

matter, because whatever view he may feel disposed to take of the professional attributes of Pecksniff, it is certain to be the wrong one. For Mr. Galsworthy remarks that "Pecksniff might have been parson, greengrocer, lawyer, chemist, or of any vocation, for all the reader remembers."

This interchangeability of vocation might, for the same reason, be extended to include any other figure of romance, either pleasant or unpleasant. It might, for example, be applied to Shylock or Sherlock Holmes, or The Great Mel or Sampson Brass or Bosinney, but it would surely necessitate alterations in the structures of the stories in which such characters appear, almost as sweeping as those which would be required if Pecksniff were anything but "an architect." It is reasonable to suppose that the money-lending fraternity of Venice would be very glad to adopt this method of dissociating themselves entirely from any connection with the peculiar business methods of Shylock.

No one has ever denied the unquestionable right of every author to satirize everybody else through the medium of his works if he chooses to do so, and nobody advocates any extension of the scheme of Professional Registration to include architects in fiction as well as in fact. Nevertheless it is surely not superfluous on the part of anyone who feels so disposed to direct attention to the extraordinary collection of individuals who are practising as architects in the realms of romance.

Mr. Galsworthy has rebuked me for taking some of these characters seriously. A person who felt constrained to laugh loudly during a performance of a play like "East Lynne" would be forcibly ejected from the theatre. He might, however, laugh in a quiet and unobtrusive fashion, in which case his mirth would pass unnoticed amidst the steady murmur of sobbing. By laughing in this manner one is, at all events, absolved from the unpardonable offence of laughing in the wrong place!

F. R. JELLEY.

Architect—Not a Gentleman

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—The incident "Architect—Not a Gentleman," mentioned in your issue for June 7, reminds me of another incident somewhat similar, which occurred some years ago. I was with a friend (a Wesleyan minister) and his little boy, when I asked the lad if he was going to be a minister like his father? "No!" said he, "When I grow up I am going to be a man."

PERCY C. WEBB.

Mr. Clutton Brock on Modern Gothic

IT is abundantly clear that Mr. Clutton Brock does not like Gothic—in its twentieth-century edition. He said so more than once, and with unmistakable emphasis, at the annual meeting of the Society for the Protection of Ancient Buildings when he addressed the company on Restoration and Renovation.

Introducing the speaker, Mr. Frederick Green, M.P., who was in the chair, said that in the early days of the Society parsons and architects had been its chief enemies. A change of heart had, however, taken place, and now the majority of members were practising architects, while clergy constantly sought their advice on repairs and restorations. In twenty-seven dioceses committees had been appointed especially to advise on restorations, and excellent work had been done by Sir Cecil Harcourt Smith and Mr. Eeles, who had served on many of these committees.

Mr. Green made yet one more plea for the preservation of *all* the city churches, whether or no they had peculiar architectural value, and also spoke of the cordial relationship now maintained with H.M.O.W. This was especially noticeable in the work done at Tintern Abbey and in Westminster Hall, where most successful results had been obtained through the collaboration of the Society.

Mr. Clutton Brock, endorsing part of the chairman's remarks, said he was glad that architects and clergy were repentant; but errors were, in spite of this, still made. He himself was even then engaged in a public controversy over the restoration of a well-known building which had been entrusted to a well-known architect. He hoped that by his invective he had lessened the flow of subscriptions.

It was difficult to explain why imitative restoration was wrong, but faith was useless if one could give no reason for that faith, whereas it was strengthened if it could be reasonably explained.

Some people could not see why a copy should not be as good as the original picture. The answer was that only the same cause could produce the same effect. There would be a difference in the feeling produced, and emotion produced was the ultimate test by which works of art were judged.

So in restoration the impulse of the imitative architect was different from that of the original architect, and the result was, therefore, different.

Learned experts were constantly taken in by forgeries because, from constant study of details, they had cut themselves off from the æsthetic experience of *feeling*. The real test of forgery was dullness. People looked at the details of a building, whereas they ought to see architecture as a language.

One ought to identify one's feelings—be thoroughly aware of them. There was a popular notion that feeling must necessarily be vague, whereas as a matter of fact it was extraordinarily precise. It was possible both to feel precisely and to understand one's feelings with equal precision. In this way one would see the beauty of the real thing, and the dreariness of the sham. *One cannot imitate a work of art.*

With regard to real Gothic, any style would go with it except sham Gothic, which expresses nothing, and goes with nothing.

Bernini, for instance, if turned loose in Durham Cathedral, would have expressed something genuine, even if it were only his hatred and contempt of the present screen, which expresses nothing.

There was a tomb in York Minster in which the finials, left unfinished, had been completed in stucco. The result was delightful, because the craftsman had simply expressed himself without any attempt at imitation.

Anything was better than imitation, and vulgarities were preferable to gentilities. Imitation of Gothic led nowhere. It was a bad habit encouraged by the clergy, who for some reason identified it with Christianity. It was, however, impossible to worship in a church which was a patchwork of old details imitated.

Sham was a great hindrance to belief in religion, because if the expression of an impulse is a failure, the actual impulse that gave it birth becomes equally a failure. A service could not fail to be affected by sham Gothic surroundings, because sham Gothic was a symptom of a sham in religion.

Sham Gothic had all the gentility of suppressed vulgarity. It was more Gothic than the real thing, putting in h's, so to speak, where they were not wanted. The whole problem of church architecture was affected by the Gothic question. It was difficult to convert people from sham Gothic because they thought it was the right thing.

The Society preserved things as examples, not for imitation. It was impossible to recover the state of feeling from which a great work of art had sprung. True Gothic had all the thrill of a discovery, and was the solution of a real constructional problem. That was why the Society wished to support and encourage originality in architecture. Religious architecture was full of dead metaphors, which must be purged away. Austerity was necessary for a time, and we must do without ornament.

We had had dipsomania, and must take the pledge until we recovered the power of invention, which had been lost in imitation.

Mr. Alfred Powell, proposing a vote of thanks, said that the public which was ready to listen and learn was larger than it had been ever before. The Society was intent on the preservation of evidence of the collective wisdom of generations of English workmen.

Labour troubles were, he felt, connected with the lack of opportunities for expression in modern craftsmanship. Individuality was absorbed into big works, and there was a consequent loss of interest.

As an outcome of the work of the Society an association was about to be started for the preservation of the older country and village cottages, which were being bought by tradesmen and altered into modern villas regardless of their historical associations or architectural value.

Seeing London—With Professor Reilly

"LET'S all go down the Strand," said Professor C. H. Reilly to a delighted audience at the R.I.B.A. last Thursday, and, under his genial guidance, down the Strand we went. It was a very pleasant trip, illuminated by a number of excellent slides provided by Mr. Hudson, informed by the wide knowledge and unerring judgment of the speaker, enlivened by cheery humour and ready wit.

Public discussion, said Mr. H. M. Fletcher from the chair, was just as necessary to architecture as it was to the other arts. Universal interest tended to increase the vitality of an art, and architecture was sadly neglected in this respect. Professor Reilly had set the ball rolling by discussing Liverpool buildings in the local papers, and a great deal of interest had been aroused. He hoped that he would speak with the same frankness on London buildings.

Professor Reilly, remarking that he had no paper to read, explained that he intended to devote his lecture to two typical London streets, the Strand and Regent Street, with some criticisms of the modern buildings therein.

It was necessary to stimulate public interest in architecture as an art; the influence of a cultured public would restrain architecture, and lead to a dignified form of expression. This had been the case in the Georgian period. It was noticeable that it seemed impossible to do wrong in some periods of architecture, in others it was certainly very difficult to do right. The problem was how to bring about a state of intense interest in what was, after all, the most vital of the arts. The chief hope lay in the schools of architecture, which were, as yet, young in England. In France and Italy, where the schools were much older, architectural standards were far higher. The schools held the future of architecture in their hands.

A step forward had been taken by the lay papers in publishing appreciations and criticisms of modern architecture. It might be said that he himself as an architect with a comparatively small practice had no right to criticize others, but, even though he could not lay an egg, he claimed to be a far better judge of an omelette than a hen. He was daily criticizing drawings and schemes, and this enabled him to formulate some general principles on the architecture of the time—what to encourage and what to restrain. He was glad to have an opportunity of saying to architects, face to face, what he had hitherto only been able to say in the lay press.

PROFESSOR REILLY AT THE R.I.B.A

Professor Reilly first showed some slides of various Paris streets, showing the advantages gained when they were designed as a complete whole. Regularity and directness of line were obtained, but in the Rue Lafayette, for instance, there was a lack of climax. It seemed to go on *ad infinitum*. Rue Castiglioni had, on the other hand, a fine climax in Napoleon's monument. Avenue de L'Opéra had not been designed as a whole by one architect, but, like Old Regent Street, had been carefully controlled, and every new block had to conform with the old buildings opposite.

A street in Bath, designed by Baldwin, showed the dignity of a complete design.

In Nancy, houses, though of varying design, were kept to the same height, and even the trees had architectural character, in lamentable contrast to a Liverpool boulevard.

A slide of Wall Street showed New York run wild, the extreme of individualism.

The essence of a street should be horizontality, and short cornices could not express this. In Old Regent Street there was uniformity of idea, but not of design. He proposed to discuss the Strand from Trafalgar Square to St. Paul's and Regent Street.

The Strand started like a country lane from a village green, its undulating curve following the river.

The Grand was a large and undistinguished building. Morley's hotel a beautiful example of plaster, with long lines and regular architecture.

Streets ran into the Strand at varying angles, and circular features had been designed to get round the difficulty of the junction angles. Charing Cross yard was a gash in the street, its little entrance lodges disguised by advertisements. These were a general disfigurement, especially the illuminated signs, which should all be relegated to the Strand as they were to Broadway in New York, where the result was most exciting. Charing Cross station itself was quiet and good, but why did it have little conservatories that reminded one of Park Lane?

The Strand was essentially picturesque and equally incongruous; it ought not to be adorned with big monumental erections. Scale and pretentiousness would ruin the Strand if it were widened.

The New Zealand building was good and quiet, with flat frontage and steep roofs, suitable to the character of the street.

The Gaiety and The Morning Post building had been compared to beauty and the beast. The Gaiety was certainly anything but gay; it suggested something monumental and civic, and was like an elephant lying on its back and kicking its feet in the air. The Morning Post building, by Mewès and Davis, was of the French type, with delicate ornament and beautiful ironwork.

Somerset House showed the qualities of reserve and dignity that were charac-

teristic of the eighteenth century, and the church opposite was beautifully placed.

The new Bush House would be very fine, with its plain cliff-like walls, forming a setting for the jewel of a church.

Marshall Mackenzie, in Australia House, had achieved the effect of a ship in full sail, expressing commercial life, a finer ideal than expressing the soul of the architect.

Sir John Burnet's building, farther on, accepts the plane of the street as the plane of his building. Fleet Street was the most picturesque view in London, but the Law Courts, with their Italian towers, suggested that mediæval tortures still existed.

Farther on it became a mere huddle of buildings crouching under St. Paul's, contrasting with the nobility of the cathedral. The architecture of Ludgate Circus was ruined by advertisements.

Showing Nash's plan of Regent Street, Professor Reilly remarked that there was no hard building line, but a series of courts and quadrangles. It showed an architecture which we have neither reached nor surpassed, consisting of a series of palaces, all within the same idea. The result was a magnificent unity. Piccadilly Circus consisted of three quadrants and then a mess, and he was glad to see the statue of Eros was kicking his leg towards the rubbish in the background.

Professor Reilly concluded an informative and stimulating address with a few rather severe criticisms of some of the newest buildings in Regent Street.

R.I.B.A. New Members

Ten Fellows, twenty-four Associates, and ten Hon. Associates were elected at a business general meeting of the R.I.B.A. held on Monday of last week. The Associates starred (*) have been granted special war exemption, and the remainder with one exception—that of Mr. C. C. M. Whitley, of Australia, who has passed a special examination—have passed the special war examination of the Institute :—

FELLOWS.

Anderson, A. W. (A. 1884), Watford.
Braddell, T. A. D. (A. 1920), London.
Brown, W. E. A. (A. 1904), London.
Cromie, R. (A. 1914), London.
Curtis, W. T. (A. 1904), London.
Mole, C. J., M.B.E. (A. 1909), London.
Owen, G. (A. 1912), Warrington.
Riddey, C. (A. 1898), Kettering.
Ruddle, A. W. D. (A. 1909), Peterborough.
Souster, E. G. W. (A. 1905), London.

ASSOCIATES.

Alward, W. W., M.Arch, Canada.
Andrews, C. D., London.
*Beaumont, J. S., M.C., B.A., Manchester.
Cheek, A. C., Leicester.
Clark, H. G., Darlington.
Davies, H. H., Liverpool.
Dawson, H. A., London.
Harrild, — M.A.Oxon, S. Devon.
Hayward, H., Glasgow.
Jackson, H. T., London.
*Jenkins, T. T., Liverpool.
Lay, A. P., London.
*Prynne, H. F., Madras, India.
Reeves, J. E., Birmingham.
Robertson, A. S., Australia.
Sadler, W., London.
Sample, E. F. R., China.
Seaton, W. G., Pontypridd, Glam.
Thompson, C. C., Canada.
*Threadgold, R. A., Liverpool.
Townsend, A. C., Liverpool.
Von Berg, W. C., M.C., France.
Whitley, C. C. M., Australia.
Willman, J. H., Taunton.

HONORARY ASSOCIATES.

Ashby, T., D.Litt., F.S.A., Director of the British School at Rome, Valle Giulia, Rome, Italy.
Bell, C. F., M.A., F.S.A., Oxford.
Clutton-Brock, A., B.A., Godalming.
Cockerell, S.C., M.A., Director of the Fitzwilliam Museum, Cambridge.
Cornford, L. C., London.
Cranage, Rev. D. H. S., Litt.D., F.S.A., Cambridge.
Montgomery, H. G., J.P., London.
New, E. H., Oxford.
Phillips, R. R., London.
Weller, H. O., B.Sc.M., Inst.C.E., Director of Building Research, 16 and 18 Old Queen Street, S.W.1.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Houses Completed Since Armistice.

In the House of Commons Sir A. Mond, in answer to Mr. Mills, gave the following figures to show the number of houses completed yearly since the armistice by local authorities and public utility societies : 1919, 100; 1920, 9,171; 1921, 68,255; 1922 (up to May 1), 30,135. He mentioned that, in addition, 33,308 houses had been completed up to May 31 by private builders under the Government subsidy. Information was not available as to the number of houses built or building by private enterprise outside the Government subsidy, but the subsidy to private builders continued to be payable in respect of qualified houses completed by June 23.

Slum Clearance and Re-Housing.

Replying to Mr. Kiley, who asked how much of the money set aside for the clearing of slum areas had been so used during the past year, Sir A. Mond said that the Government had undertaken to provide an annual sum not exceeding £200,000 towards the deficits incurred by local authorities in dealing with the clearance of slum areas, and the provision of the necessary re-housing. It was estimated that schemes approved, or in various stages of preparation, would involve an annual Exchequer contribution amounting to approximately £60,000, and negotiations were proceeding in connection with additional schemes for which commitments for a further annual sum of £13,000 had been provisionally agreed. Negotiations with local authorities on other schemes were pending.

Unemployed Building Trade Operatives.

Sir M. Barlow, in answer to Mr. T. Thomson, stated that the number of persons registered as unemployed in the building trades in Great Britain at May 22, the latest date for which figures were available, was 116,012, of whom 41,550 were craftsmen, and 74,462 labourers. The amount paid in benefit in the week preceding May 22 was about £65,000.

Employment Register for Architects' Assistants

Mr. C. Bertram Parkes, Hon. Secretary of the Birmingham Branch of the Architects' and Surveyors' Assistants' Professional Union, asks us to make known to architects and surveyors practising in the Midland counties that a register of assistants requiring employment is kept by the Birmingham Branch. This register, although primarily intended for the convenience of members, also contains names and particulars of several assistants who have not applied for membership of the Union, and, of course, every endeavour is being made to find employment for these men. It will be a great help to the local unemployed assistants if architects and surveyors having vacancies upon their staffs will communicate with Mr. Bertram Parkes at 62 Thornhill Road, Handsworth, Birmingham (giving full particulars of the type of assistant required and the salary to be paid). Names and addresses of suitable men will then be forwarded by return of post. The Birmingham Branch of the Union is incurring considerable expense in trying to help those assistants in their area who are unfortunately disengaged, and it is hoped that support will be forthcoming from the architectural and surveying practitioners of the district.

Foundry Trades Exhibition

An international foundry trades exhibition, the first of its kind in Europe, is now being held at Bingley Hall, Birmingham. It is promoted by the Birmingham Chamber of Commerce, in conjunction with the Institution of British Foundrymen and the British Cast Iron Research Association, and its president is Lord Weir of Eastwood. Exhibitors have been attracted from all parts of the country, and, in addition, several American, French, and Belgian firms are represented. A feature is an up-to-date foundry plant, illustrating the enormous strides made in recent years in the art of moulding. A combined group, representing various British trades, will no doubt attract attention. Included in this are grey foundry work, malleable foundry work, semi-steel exhibits, cast-iron rolls, an iron ferrous foundry, and steel castings. America is well to the fore with semi-steel productions. For the national competition organized for foundry employees, in core making, moulding, and pattern making, names poured in at such a rate that it was found necessary to close the list earlier than the appointed time.

Book Notice

War Office Building Work.

The War Office Department's "Schedule of Prices for Works and Repairs to Buildings, etc.," which has just been issued from H.M. Stationery Office, is more comprehensive than its title might seem to suggest to the superficial reader. Prices, however, involve definition of the works against which they are quoted; and, in fact, a brief specification is applied under each trade. It therefore follows that, in explaining fully and clearly what they expect to get for the prices they are prepared to pay, the Department have produced a handy synopsis of building construction in its minor applications, such as repairing; and the requirements are in some instances made still clearer by the aid of diagrams : three plates of them relate respectively to surface gullies, manholes, and the various kinds of facings for stone walling. Under each trade heading there are included, besides the concise specification, many useful notes on materials, workmanship, and sundry methods of meeting various contingencies and special conditions; while memoranda concerning gauges and weights of metals used in building are appended. Whether for its specific information on War Office requirements for building, or for the means it affords for the comparative study of prices, qualities, and processes, this publication is of unquestionable value to architects and builders; but its price—15*s.* for 308 foolscap pages—will rather tend to restrict its sale to those engaged, or likely to be engaged, on War Office work.

Schedule of Prices for Works and Repairs to Buildings, etc., of the War Department. London : Printed under the Authority of His Majesty's Stationery Office, by Harrison and Sons, Ltd., St. Martin's Lane, W.C. 2. Price 15*s.* net.

The Stability of Walls.—VI

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

WALLS to hold up water, such as tank and reservoir walls and dams, are designed upon the same principles as retaining walls for earth, but the pressure is greater for a given height, and so they have to be thicker. Fig. 21 shows by the horizontal ordinates of the shaded triangle how the pressure per sq. ft. against a wall varies from 0 at top to wh at bottom, the centre of pressure being opposite the centre of gravity of the triangle at one-third the height, and the total pressure = area of triangle $= \frac{1}{2} wh^2$, w being weight of water per cub. ft. $= 62\frac{1}{2}$ lb. The pressure of water always acts perpendicular to the containing surface, so that if the water side of the wall is sloping, as in Fig. 22, the pressure at the bottom will still be wh, but the total pressure will be $\frac{1}{2}whl$, acting at one-third the height. As the pressure increases towards the base the wall will, of course, be made thicker at the bottom than at the top. There are two usual cases (a) where the wall has only the water on one side, and (b) where the wall has water on one side and earth on the other. Let Fig. 23 represent a concrete reservoir on the surface of the ground, with 12 ft. depth of water inside. The total pressure against the wall will be $\frac{1}{2}wh^2 = \frac{1}{2} \times 62{\cdot}5 \times 144 = 4500$ lb. Now assume the thickness at base of wall to be six-tenths of the working height $12 \times 0{\cdot}6 = 7{\cdot}2$ ft., say, 7 ft. 3 in., thickness at top 6 in., material 1 : 2 : 4 concrete, weighing 140 lb. cub. ft. The weight of 1 ft. run of the wall will be

$$13 \left(\frac{\cdot 5 + 7{\cdot}25}{2} \right) 140 = 7052{\cdot}5 \text{ lb.}$$

The centre of gravity of the wall found graphically will be 2 ft. 5 in. from the vertical face. Producing the centre of gravity line and the thrust line, and setting off the forces in their respective directions as shown, the diagonal of the completed parallelogram will be the resultant of the forces. This is found to cut the base at 1·375 ft. beyond its centre. The maximum stresses will then be

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{7052{\cdot}5}{7{\cdot}25 \times 1} \pm \frac{7052{\cdot}5 \times 1{\cdot}375}{\frac{1}{6} \times 1 \times (7{\cdot}25)^2}$$

$= 972{\cdot}76 \pm 1106{\cdot}93 = 2080$ lb. sq. ft. compression and 134 lb. sq. ft. tension. This will be quite safe, and probably 7 ft. width of base would be sufficient with good material and workmanship. In modern practice reinforced concrete is often used, so that lighter work can be adopted, and the walls are also tied in at the top by a flat reinforced concrete roof, still further reducing the stresses.

Now take an example of the second case, where the reservoir is sunk in the ground. The wall must be built to resist the external pressure of the earth when the reservoir is empty, and must also be safe gainst both pressures when the reservoir is full. Try a wall with a thickness at base of one-third the total height $\frac{13}{3} = 4{\cdot}3\dot{3}$ ft. Assume the natural slope of the earth 40 deg. and weight 100 lb. cub. ft. Then the section and graphic diagram will be as Fig. 24. The maximum stresses at base due to earth pressure against empty reservoir

$$= \frac{W}{A} \pm \frac{M}{Z} = \frac{4398{\cdot}33}{4{\cdot}3\dot{3}} \pm \frac{4398{\cdot}33 \times 1{\cdot}083}{\frac{1}{6} \times (4{\cdot}3\dot{3})^2}$$

$= 1015 \pm 1522{\cdot}5 = 2537{\cdot}5$ lb. sq. ft. compression and 507·5 lb. sq. ft. tension, which will be quite safe. Now imagine the reservoir full. The pressure at bottom of wall will be $wh = 62{\cdot}5 \times 12 = 750$ lb. sq. ft. The total pressure at one-third height $= \frac{1}{2}whl = \frac{1}{2} \times 62{\cdot}5 \times 12 \times 12{\cdot}51 = 4691{\cdot}25$ lb. perpendicular to bottom face. Set this down to the same scale as the previous work to make a parallelogram with the previous resultant as shown by dotted lines. The new resultant cuts the base at 2·125 ft. from the centre, and would seem to give maximum stresses of

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{5740}{4{\cdot}33} \pm \frac{5740 \times 2{\cdot}125}{\frac{1}{6} \times (4{\cdot}3)^2}$$

$= 1324{\cdot}6 \pm 3897{\cdot}4 = 5222$ lb. sq. ft. compression and 2572·8 lb. sq. ft. tension, but it is not conceivable that these could arise in fact, the explanation being that the earth pressure shown is only the active part, whereas the passive resistance to any movement of the wall would far exceed this. It may be taken for granted then that if the walls of a sunk reservoir are properly designed to resist the earth pressure when empty they will also resist the water pressure when full.

In order to save some excavation and at the same time to partially balance the pressure of the water on the walls, reservoirs are frequently sunk one-third to one-half their depth in the ground, the former when the material excavated is formed into a bank round the sides, and the latter when the top also is covered, as a protection from the heat.

(To be concluded.)

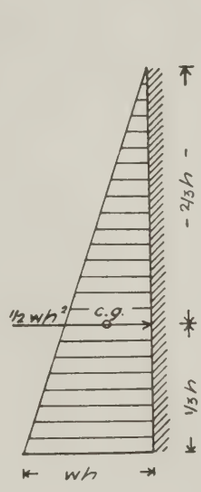


FIG. 21

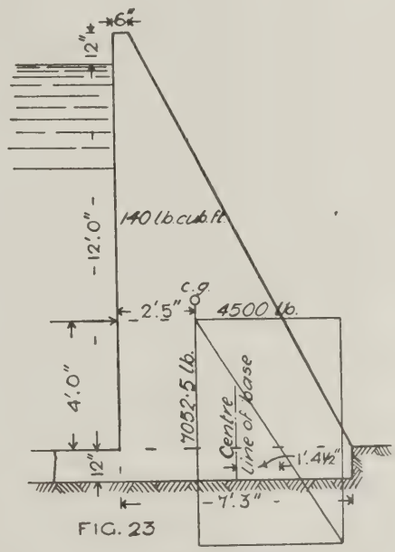


FIG. 23

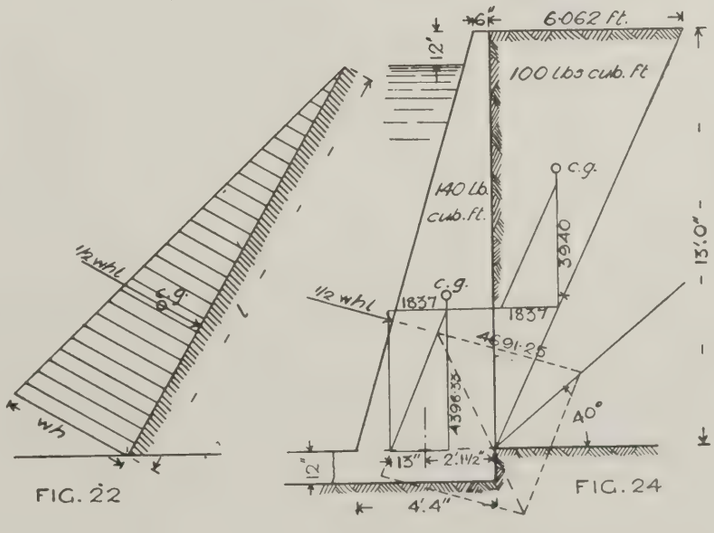


FIG. 22 FIG. 24

Enquiries Answered

Price of Detached House.

J. P. B. writes: "What would be the price per cubic foot of a detached house having two gabled ends and one small gable at side, and built to the following specification?—Ground floor: floor space, say, 22 ft. by 23 ft. 6 in., height from floor to ceiling 8 ft. 3 in. Upstairs: floor space, say, 22 ft. by 21 ft., and 8 ft. high from floor to ceiling. Brick cavity external and 3 in. and 2 in. breeze internal walls. Simple fittings and practically no mouldings."

—The price is dependent on the locality in which the house is built, and may range from 8½d. per foot cube in some Eastern Counties to 1s. 3d. in North-west London. Both these figures are based on recent tenders. G.

Humidity in a Lithographic Printing Room.

F. J. writes: "Paper stored in a room used for lithographic printing is deleteriously affected by the humidity of the atmosphere. The room is one story high, has a glass roof, and is heated by low-pressure hot-water pipes at floor and overhead levels. It is thought that the humidity is due to the glass roof, and that the trouble in connection with the paper may be overcome if an even temperature can be maintained.

"(1) Does a glass roof cause a greater than nominal change of air?

"(2) If an accelerator was added to the heating plant (*a*) would it work satisfactorily, and (*b*) would it ensure a more equable temperature? I think that an accelerator would help if it can be successfully installed.

"The room measures 76 ft. by 74 ft., and has an exposed wall, 76 ft. by 12 ft., facing N.N.E., in which there are five 6 ft. by 6 ft. windows. Part of the floor, 30 ft. by 74 ft., is constructed of concrete, with a cement finish, and the remainder is of concrete and 2 in. pitch-pine block flooring. The glass roof measures 74 ft. by 46 ft., and is surrounded by buildings which are 20 ft. higher and which shield it from N. and N.E. winds. Ventilation is secured by two exhaust vents, thirty-two sashes, 2 ft. 7 in. by 2 ft. 6 in., swivel operated by screw levers, and five sashes, 3 ft. by 2 ft., in the N.N.E. wall. Condensation on the glass is in no way excessive, and is no more than would be found under ordinary conditions. Heating is by two boilers fixed in a central position in the buildings, and the superficial area of all the rooms heated is 60,000 ft. There is no steam in or near the room, and no coils or radiators are installed, the method of heating being by 4 in. flow and return pipes."

—(1) The infiltration losses, or air interchanges, of a room having a glass roof are considerably in excess of one of concrete, boarded slates, or similar construction. This is due to the comparatively greater area of crevices and interstices around the glazing, and the higher porosity.

(2) (*a*) There should be no difficulty in fitting an accelerator of the electrically-driven type to the existing installation. (*b*) The correspondent's assumption as to the desirability of obtaining an equable temperature is correct. The trouble is caused no doubt not so much by the actual temperature as by its fluctuations. During the night, when the boilers are banked, the temperature of the room will decrease appreciably, and the capacity of the air to hold moisture will be correspondingly reduced. In consequence, any materials of an absorbent nature will take up more moisture, which in the case of paper will cause it to stretch. A large amount of glass surface will contribute materially to the reduction in the internal temperature, owing to its low heat-retaining properties. To maintain an equable temperature throughout the whole of the room would necessitate running the boilers at their full power continuously. If a night watchman is employed, no doubt this could be arranged, though it would involve additional fuel consumption. If an accelerator were installed, it would have the effect of increasing the rate of heat transmission from the pipe-radiating surface by some 10 per cent.—providing the boiler power is adequate. To a certain extent this would help to overcome the difficulty, as it would afford greater control and facilitate regulation of the heat, but it would not be entirely successful unless arrangements were made to maintain a constant temperature during night and day.

F. B. C.

Steel-framed Building.

"Steel" writes: "(1) In erecting under the London Building Acts a building of steel skeleton construction, must the area of the window glass be restricted to allow a certain amount of solid wall to be put in between the stanchions of the outer walls, as I understand is the case for reinforced concrete? I wish to erect a steel skeleton, and fill in between with wood or cast iron and glass. (2) Where can I obtain a copy of the London Building Acts containing regulations for steel skeleton construction? (3) I can work out the stability of walls, wind pressures on roof trusses, and such like, but I am somewhat at sea when it comes to finding the effect of wind pressure on a building of several stories. Can you therefore name a book which explains, without higher mathematics, how to find the necessary wind bracing required for the steelwork? The floors will be formed with wood joists, so that there is not a great weight to steady the structure, which will be used as business premises."

—(1) If the loads on floors and roof are transmitted to the foundations by a skeleton framework of steel, the external walls may be made in accordance with the Steel Frame Act, 1909, instead of the London Building Acts, 1894 to 1909, i.e., not less than 8½ in. for the topmost 20 ft. of the height of the building, and 13 in. for the remainder. The party walls must be in accordance with the old Acts. There appears to be no limit as to the area of window-glass allowed in the external walls of steel-framed buildings. (2) The Steel Frame Act is included in the London County Council (General Powers) Act, 1909, and copies may be obtained through any bookseller from Wyman and Sons. It is also given in full in "Modern Building," in six volumes (Gresham Publishing Co., Ltd.). (3) A wind pressure of 30 lb. per square foot on the upper two-thirds of the wall surface of every building exposed to wind pressure must be allowed for. It is difficult to estimate how much special bracing is required to effect this, as every junction in the steelwork adds some stiffness, but gusseted angle-brackets may be placed below the girders and against the uprights without causing much obstruction.

HENRY ADAMS.

Sewer or Drain.

R. writes: "Further use is to be made by one of the parties of a combined drain under a private road. The drain is taken into the Council's sewer in the public road, and is an old one. It is anticipated that the drain leaks and will have to be relaid. (1) Can the owner throw the responsibility upon the Council's surveyor for the relaying of the drain from the sewer to the point where it ceases to be a combined drain under the Public Health Act? (2) If not, is it the duty of the Council to test the drain at their expense to prove the unsoundness of same?"

—Though the details of each particular property must be taken into consideration, I believe the decision in "Holland *v.* Lazarus" still holds perfectly good in law. It is to the effect that "a drain receiving the rainwater of two or three houses is to be regarded as a sewer, and not merely as a drain." The cost of examination of a drain falls upon the local authority. The definition of drain given in the Public Health Act, 1875, is "any drain used for the drainage of one building only, or premises within the same curtilage and made . . . for the purpose of communicating . . . with a sewer into which the drainage of two or more buildings . . . is conveyed."

F. S. I.

Lintels for Cavity Wall.

A. L. writes: "What is the best and cheapest method of constructing a lintel over (*a*) a casement, and (*b*) a sash window opening of ordinary width, say 4 ft. 6 in., where it is desired to show the bricks placed on face as soldiers? The wall is an 11 in. cavity wall."

—Wood lintels for the internal part of the wall usually have some advantage in cost owing to their greater facility in use, but the inevitable shrinkage which must occur as the building dries, with consequent cracks in brickwork and plastering, constitutes a ground for preferring concrete lintels either pre-cast or in situ. The face arch of frogged brick-on-end if carefully set in cement mortar with full joints will need no other centering than the window frame in the case of mullioned casements set at or near the outer face of walls. In the case of French casements or double hung sashes it is desirable to provide a light temporary centering and struts to prevent deflection of arch and window head while the work is "green." G.

The Week's News

Ramsgate Improvements.

Ramsgate Corporation are inviting competitive plans for the development of the West Cliff extension.

Road Scheme for Nottingham.

Nottingham City Council have adopted a central road construction scheme at a cost of £316,000, which includes £88,000 for rehousing.

Housing at Hanworth.

A large piece of land has been cleared and nearly forty houses built within six weeks at Hanworth, Middlesex. About 600 men were employed.

Sir Charles Ruthen.

Sir Charles T. Ruthen, F.R.I.B.A., Director-General of Housing, has severed entirely his association with the Society of Architects as from May 17.

Cassiobury Park.

During the first three days' sale of the contents of Cassiobury Park nearly £15,000 was realized. A Louis XV writing-table fetched £347.

Garrick Temple a Dwelling-house.

Now that Garrick Villa, Hampton-on-Thames, has been converted into flats, it is proposed to convert the Orangery and Temple into dwelling-houses.

Edinburgh Exhibition Hall.

A start has been made in the erection of Edinburgh's Exhibition Hall in Annandale Street. It is hoped the first exhibition will be opened within its walls in October.

Institute of Metals.

The annual autumn meeting of the Institute of Metals will take place in Swansea from September 20 to 22. This meeting is the first to be held by the Institute in South Wales.

Housing at Brighton.

About 400 houses have been completed under the Corporation housing scheme on the Moulscombe estate. Another 100 buildings will complete the present contract.

British Institute of Certified Carpenters.

On Saturday next the annual summer outing of the Northern Section of the Incorporated British Institute of Certified Carpenters is to be held at Liverpool and Eastham. The programme includes a visit to Liverpool Cathedral.

Factory Extensions at Stafford.

Large alterations are in contemplation to the factory of Messrs. Lotus, Ltd., Stafford. The proposed extensions will be constructed of brick with steel framing and concrete floors. The architects are Messrs. Sandy and Norris, F. & A.R.I.B.A., of Stafford.

New Church for Birmingham.

Work has begun on the erection of a new church and presbytery for the Church of the English Martyrs, Sparkhill, Birmingham. Messrs. Sandy and Norris, F. and A.R.I.B.A., of Stafford and Birmingham, are the architects.

Blackpool Enterprises.

A new pavilion is to be erected on the North Pier in place of that burned down last September. The work is being rapidly proceeded with. There is still no final decision about the site of the local war memorial, upon which it is proposed to spend £15,000.

Professional Practice.

The practice of the late Mr. Arthur W. Cooksey, F.R.I.B.A., of 6 Adam Street, Adelphi, W.C., is being carried on at the same address by his son, Mr. R. A. Cooksey, A.R.I.B.A., in conjunction with Mr. A. H. Hasnip, under the style of Arthur W. Cooksey and Partners.

Statue to Sir John Brunner.

A bronze statue on a granite pedestal of the late Sir John Brunner, one of the founders of Brunner, Mond & Co., has been unveiled at Winnington, Northwich, by Sir Alfred Mond, Minister of Health. The monument, which stands 16 ft. high, is the work of Sir Goscombe John.

Building in South Africa.

According to Mr. W. Delbridge, President of the Cape Institute of Architects, the building public of South Africa is much better off than it is in England and Europe. He sees no signs of an early reduction in building costs beyond a limit of 10 per cent.

A Relic of Ypres.

The famous British notice-board affixed to the Cloth Hall and Cathedral ruins, "This is Holy Ground," has been taken down by the Burgomaster and Council of Ypres and sold to a Canadian, who has presented it to the McGill University Museum, of Montreal.

Windsor Memorial.

On Sunday last at the Garrison (Holy Trinity) Church at Windsor a war memorial, erected in honour of the 14,000 officers, N.C.O.'s, and men of the Brigade of Guards, was dedicated by Bishop E. D. Shaw (Archdeacon of Oxford).

£6,000,000 Cork Scheme.

The scheme for the development of Cork as a port at a contemplated expenditure of £6,000,000 has been before the Irish Ministry of Economics, which has communicated with the chairman of the Cork Harbour Board, stating that before the scheme would receive Governmental approval it would require legislation.

Hammersmith School of Arts and Crafts.

On Saturday, Monday, and Tuesday next, an exhibition of students' work is to be held at the Hammersmith School of Arts and Crafts. On Saturday the exhibition will be open from 10 a.m. to 8 p.m., and on Monday and Tuesday from 10 a.m. to 9.30 p.m. The school is situate in Lime Grove, Shepherd's Bush, W.12.

Charterhouse War Memorial.

The foundation stone of the Charterhouse War Memorial Chapel has been laid at the school at Godalming. Mr. G. Gilbert Scott, R.A., F.R.I.B.A., is the architect. The cost is estimated at £58,000. Of this £48,000 is provided for, and old boys of the School are to subscribe the remainder. Mr. Scott's design was illustrated in the JOURNAL of May 3.

National Dickens Museum.

It was announced at the annual conference at Cheltenham on Saturday last of the Dickens Fellowship that the London branch had secured the option to purchase for the purpose of a National Dickens Museum No. 48 Doughty Street, London, where Dickens lived after his marriage and where he wrote "Pickwick Papers," "Oliver Twist," and part of "Nicholas Nickleby."

International Congress of Architects.

The tenth International Congress of Architects will be held at Brussels from September 4 to 11 next on the occasion of the fiftieth anniversary of the foundation of the Société centrale d'Architecture de Belgique. On this occasion an exhibition of architecture will be opened on September 5 at the Palais d'Egmont. It will comprise two divisions, the one Belgian, the other foreign. Full particulars can be obtained from M. G. Caluwaers, 290 Avenue Louise, Brussels.

New Baths for Nottingham.

The Nottingham Public Baths Committee have reconsidered their report for the erection of washing baths in Hawthorn Street at an estimated cost of £6,500, and state that buildings of a temporary character would be unwise, and in the end more costly. The proposed accommodation will form part of a larger permanent scheme, and by effecting economies the cost may be reduced £1,000. The scheme is for sixteen washing baths.

Cheaper Gas in London.

The Gas Light and Coke Company announce that there will be a substantial reduction in the price of gas as from the reading of the meters for the June quarter. The actual amount of the reduction will, it is stated, be announced as soon as possible after the closing of the company's accounts for the half-year. At the same time the company announce an increase in the calorific (or heating) value of the gas they supply from 475 to 500 British thermal units per cubic foot. In future, therefore, there will be as much heat in 95 cubic feet of gas as formerly there was in 100 cubic feet.

Housing Progress in Scotland.

The following figures show the progress made in State-aided housing schemes in Scotland to May 31: Permanent houses completed, 8,671; temporary houses completed, 665; reconstructed houses completed, 89; houses completed under the private subsidy schemes, 1,672; making a total of 11,097. There are 9,322 houses at present under construction in connection with housing schemes carried out by local authorities and public utility societies. The total amount paid by the Scottish Board of Health in respect of the 1,672 houses completed under the private subsidy schemes is £403,829 13s. 4d.

The Shaftesbury Homes & "Arethusa" Training Ship

On July 14 a ball in aid of the Shaftesbury Homes and "Arethusa" Training Ship is to be held at the Hyde Park Hotel. The Shaftesbury Homes and "Arethusa" Training Ship are under the highest Royal patronage, their Majesties the King and Queen being its patrons, and H.R.H. the Prince of Wales its president. The Hyde Park Dance Club, under the guidance of Mr. E. R. B. Graham, the honorary secretary, who has previously arranged successful dances for various charitable objects, has kindly undertaken the ball. Dancing will take place from 10 p.m. to 3 a.m. Mr. Corelli Windeatt's orchestra has been secured, and a squad of sailor lads from the Society's training ship "Arethusa" will be in attendance to dance the hornpipe. The ball will be under Royal and distinguished patronage, as the following list will show :—

H.R.H. the Duke of York, H.R.H. Prince Henry, H.H. Princess Helena Victoria, the Dowager Countess of Jersey, C.B.E., Lady Malise Graham, Vice-Admiral C. S. Hickley, C.B., M.V.O., and Mrs. Hickley, the Rt. Hon. H. Pike Pease, M.P., and Mrs. Pike Pease, Mr. Cecil Harmsworth, M.P., Mr. Howson F. Devitt and Mrs. Devitt, Commander F. C. G. Coates, D.S.O., R.N., and Mrs. Coates, Lord Lee of Fareham and Lady Lee of Fareham, The First Lord of the Admiralty, Rear-Admiral the Hon. Sir H. Brand and Lady Brand, Vice-Admiral Sir Roger Keyes and Lady Keyes.

Tickets (which include continuous buffet supper), price £1 1s. each, or ten for £7 7s., may be obtained on application to the Secretaries, 164 Shaftesbury Avenue, W.C.2; Mr. H. H. Millett, 7 Brook Street, Hanover Square, W.1; the Hon. Secretary, H.P.D.C., Mr. E. R. B. Graham, 222 Strand, W.C.; and the Manager, Hyde Park Hotel, Knightsbridge, S.W.1. Arrangements have been made whereby tables can be booked for dinner at the hotel at a fixed price of 10s. 6d. a head, on application to the Hon. Secretary of the Hyde Park Dance Club, 222 Strand, W.C.2. The Committee earnestly appeal to all their subscribers to make the ball a complete success. They want to dispose of at least a thousand tickets. For the sake of the sterling work which is being done for poor British boys, and has been done for eighty years, the Committee ask for liberal support.

Advisory Arts Committee for Birmingham

A deputation from the Birmingham Civic Society waited upon the Lord Mayor about three months ago with the object of interesting him in a scheme for the formation in the City of an Advisory Arts Committee, to which all new designs for public buildings, bridges, statues, fountains, monuments, and memorials to be erected in the streets, public parks, or any municipal building should be first submitted. The Lord Mayor undertook to lay the scheme before the committees of the Council likely to be affected, and all of them approved the idea, subject to their having a perfectly free hand as to what should be submitted to the Advisory Arts Committee, or whether or not they should adopt the criticisms and advice which might be given. On June 16, at a meeting presided over by the Lord Mayor, and attended by several chairmen of Corporation Committees, Sir Gilbert Barling (Vice-Chancellor) and the Principal of the Birmingham University (Mr. Grant Robertson), and Mr. W. Haywood (Honorary Secretary to the Civic Society), a draft constitution for the new committee was approved. The committee will consist of the Lord Mayor, a representative of the Public Works Committee, the City Surveyor, the Vice-Chancellor, the Principal of the University, the Director of the School of Art, the Director of the School of Architecture, the President of the Birmingham Architectural Association, the Chairman and Hon. Secretary of the Birmingham Civic Society, and a representative of the Education Committee. A clause in the draft constitution sets forth that hereafter all new designs of the kind referred to above shall be reported on by the Advisory Arts Committee.

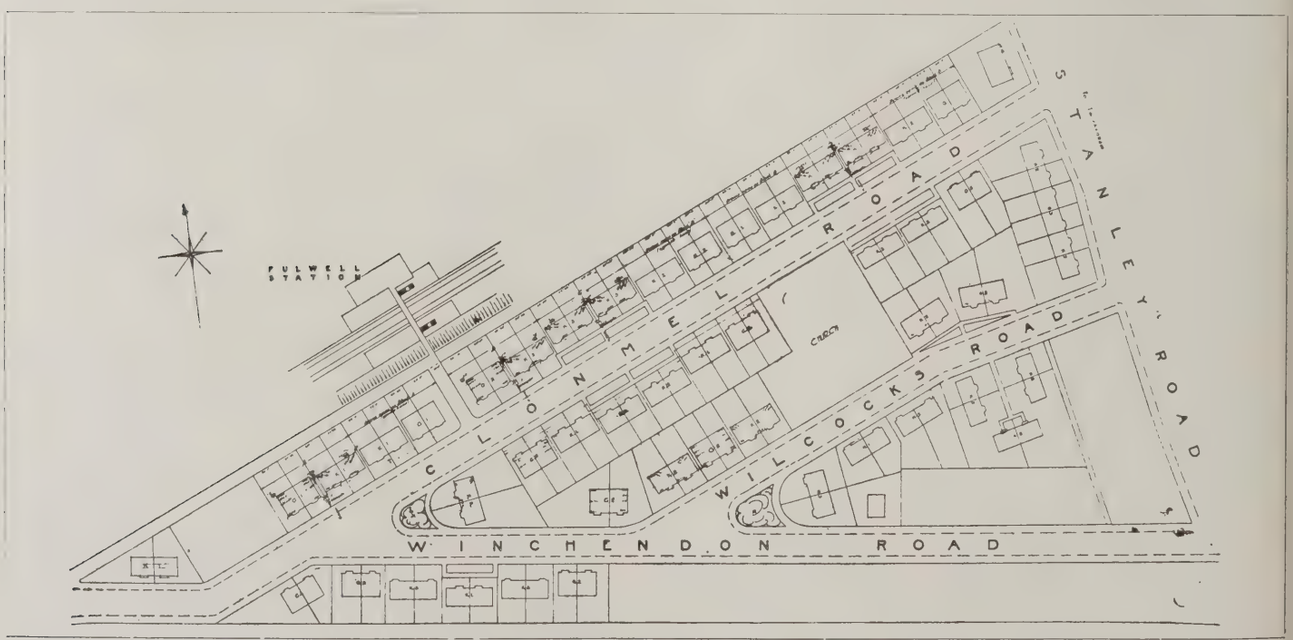
List of Competitions Open

Date of Delivery.	Competition.
June 30	Erection of a New Secondary School at Westcliff. Premiums £150, £100, and £50. Assessor, Mr. George H. Widdows, F.R.I.B.A. A deposit of £2 2s. will be required by the Committee for the Plan and Conditions of Competition. Apply Mr. H. Farrands, M.A., Director of Education, Education Offices, Southend-on-Sea.
June 30	Museum and Institute as war memorial for City of Auckland, New Zealand. Cost £170,000. Premiums amount to £1,000. Apply Secretary, R.I.B.A. Through the courtesy of a New Zealand architect, now in London, three photographs showing different aspects of the site of the Auckland War Memorial have been lent to the R.I.B.A. They are exhibited in the R.I.B.A. Library for the benefit of competitors.
July 15	Poster to be used at the R.I.B.A. for advertising the exhibitions of drawings which are held from time to time in the Galleries. Premium £5 5s. Assessors—Mr. Halsey Ricardo, F.R.I.B.A., Professor S. D. Adshead, M.A., F.R.I.B.A., and Mr. Alfred Cox, F.R.I.B.A. Apply Secretary, R.I.B.A., 9 Conduit St., W.1.
No Date	Lay-out of Land at West Cliff, fronting the sea, in Promenades, Recreation Ground, Roads, and Building Plots. Premiums £300, £200, and £100. Apply Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate.

Publications Received

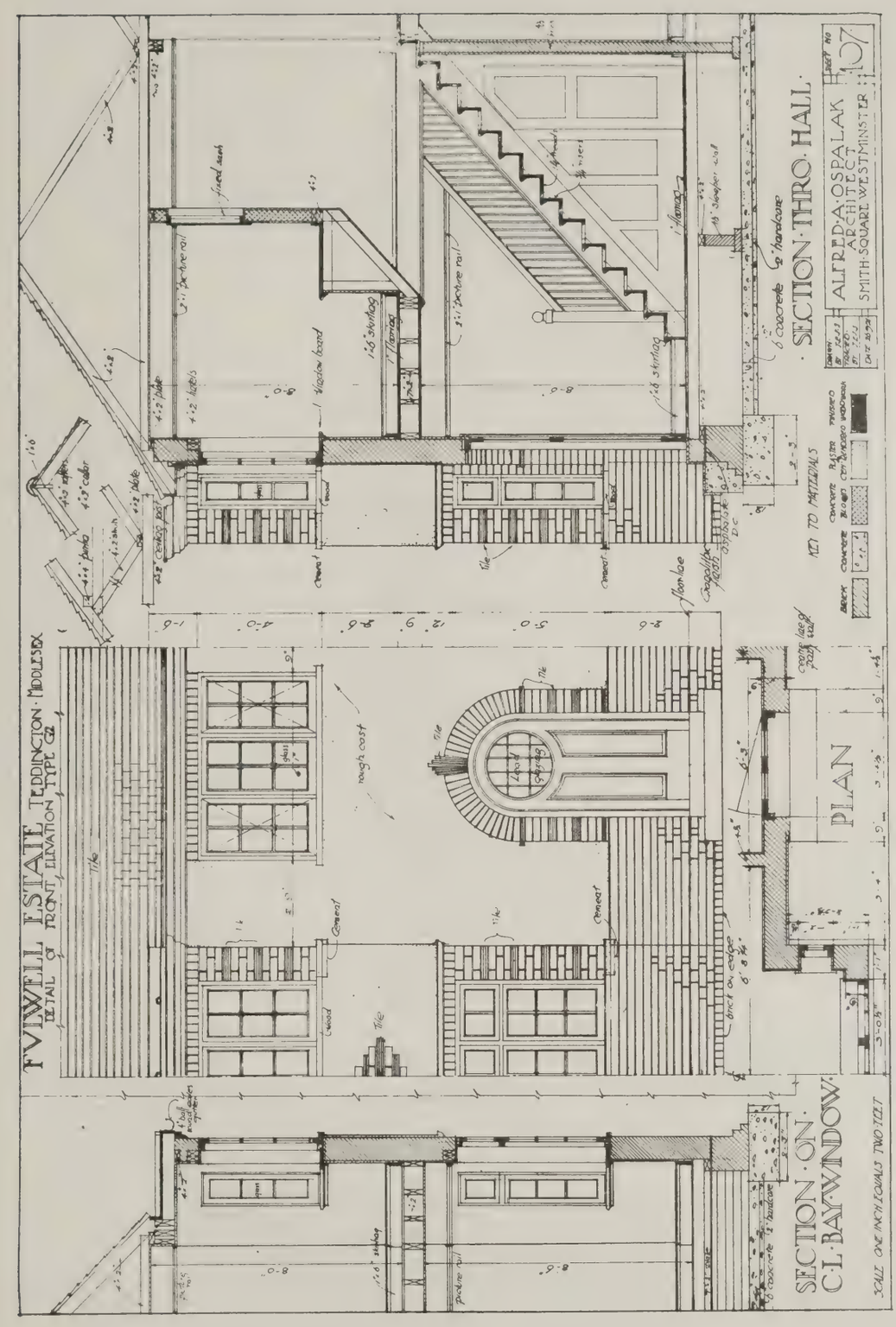
"The Book of Bungalows." By R. Randal Phillips. Second Edition. Revised and enlarged. Price 8s. 6d. net. The "Country Life," Ltd., 20 Tavistock Street, Covent Garden, W.C.2.

"Working of Dynamos and Electric Motors." Price 1s. 6d. net. The National Boiler and General Insurance Company, Ltd., Manchester.

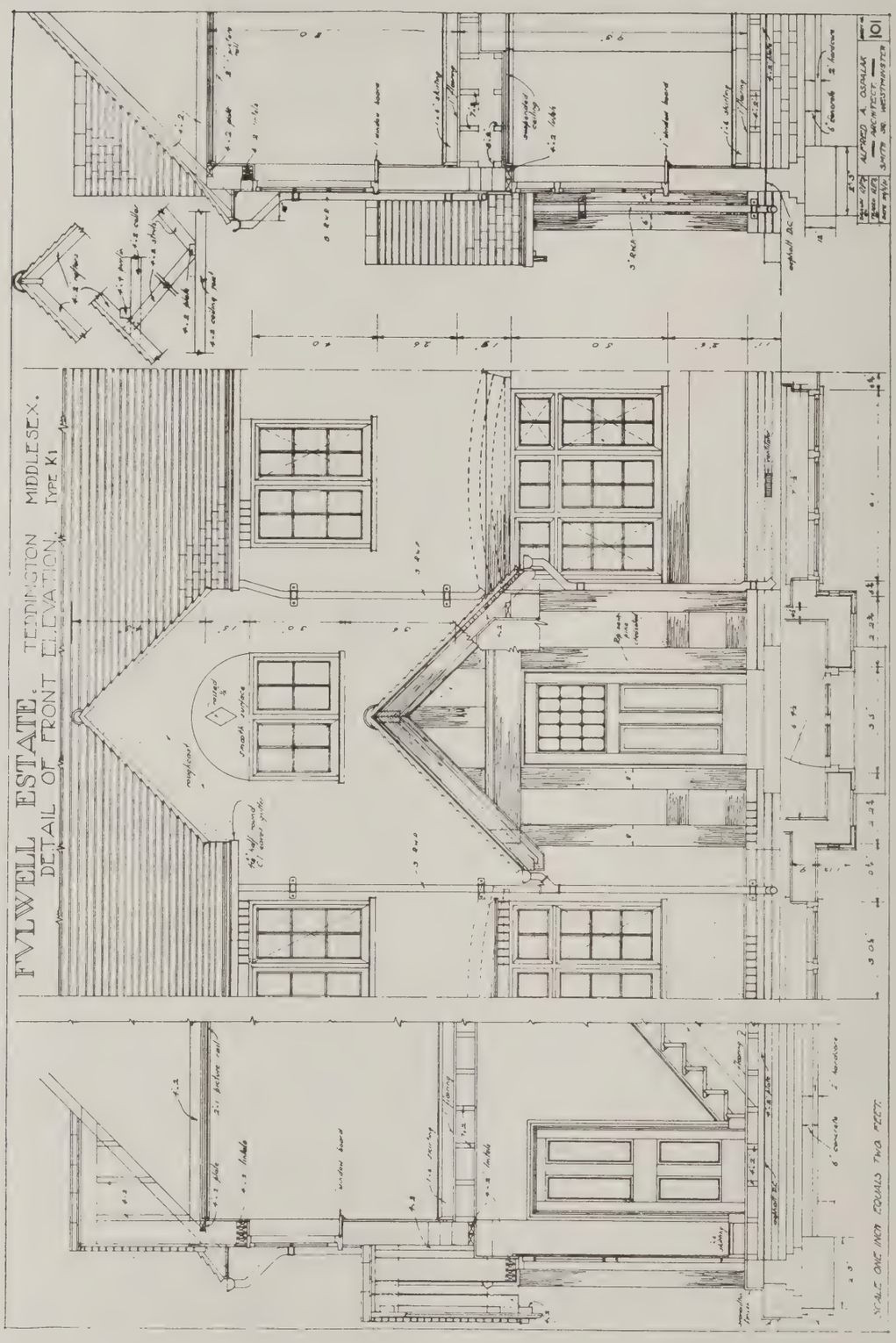


FULWELL HOUSING SCHEME, TEDDINGTON, MIDDLESEX. ALFRED A. OSPALAK, ARCHITECT.

(*See also pages* 901, 902)



HOUSE ON THE FULWELL ESTATE, TEDDINGTON, MIDDLESEX: DETAIL OF FRONT ELEVATION
ALFRED A. OSPALAK, ARCHITECT.



HOUSE ON THE FULWELL ESTATE, TEDDINGTON, MIDDLESEX.: DETAIL OF FRONT ELEVATION
ALFRED A. OSPALAK, ARCHITECT.

Trade and Craft

South-Western Stone Co., Ltd.

Mr. F. Partridge has been appointed manager of the South-Western Stone Co., Ltd., of 110a New Road, Battersea, S.W.8, in place of the late Mr. A. Findlay. Mr. Partridge took up his duties on June 7.

New Paint Medium.

Mr. Charles N. Exley, of the Plexter Chemical Company, Limited, Glasgow, and Mr. Charles H. E. Ogilvie, a Glasgow artist and portrait painter, have discovered a new vehicle which eliminates from paint all oil material. This interesting development in the use of paint, it is claimed by the inventors, will prove a boon not only to the artist, but to the commercial painter and the public generally.

Truscon Hollow Floor.

We have received from the Trussed Concrete Steel Co., Ltd., a new booklet dealing with their Truscon hollow floor. This brochure has been carefully compiled, and the illustrations and letterpress clearly describe the method of erection. Soundproof flat-span floors always appeal to architects, and as this floor is designed on the T-beam principle and is economical both in cost and construction, it will no doubt be popular. The address of the company is 22 Cranley Gardens, South Kensington, S.W.7.

Electric Light Fixtures.

The General Electric Co., Ltd., have issued recently a new edition of their complete catalogue of electric light fixtures on which all prices have been revised to the present-day level. The catalogue contains some 160 pages and over 600 illustrations of pendants, brackets, ceiling fixtures, electroliers, standards, and bronzes in designs suitable for every domestic and public lighting requirement, and is of the most complete and comprehensive nature imaginable. Copies may be had on application to the company at their Head Office, Magnet House, Kingsway, W.C.2, or at any of their numerous branch establishments.

Simplex Conduits.

Messrs. Simplex Conduits, Ltd., of Garrison Lane, Birmingham, have just issued a new catalogue (No. 909) dealing with their conduits, fittings, and accessories. The Simplex Conduit system of electrical wiring for light and power installations was introduced almost twenty-five years ago, and since that time the system has been steadily perfected. Fittings and accessories of improved design have been introduced to facilitate and cheapen the cost of wiring and to meet the conditions laid down by the various governing bodies for protection in respect of fire and life. The question of protection of the conduits and fittings themselves from corrosive influences has received a large amount of attention, and the company's plant and methods employed both in enamelling and galvanizing are claimed to be the most perfect at present known. Considerable attention has been paid to standardization, and all conduits and fittings are manufactured in conformity with the British Engineering Standards Specification, and are consequently readily interchangeable. Special fittings have been devised to enable subsequent extensions to be made with the minimum of interference to existing installations. The company manufacture in connection with their conduit system a complete range of material in conformity with the Home Office regulations, including switch and fuse gear, distribution boards, electric light fittings, etc. The company have very large tube mills and their foundry and engineering shops are fitted with the latest plant and precision tools, devised to make a perfect product as inexpensive as possible to the user. The company carry heavy stocks both at their Birmingham works and at their branches throughout the country. The present catalogue deals with conduits and fittings and the usual accessories. The original intention of the company was to publish the catalogue on January 1, but owing to the extreme instability of prices at that time its issue was postponed until June 1. Even now the prices of conduit have been omitted from the list and printed on a separate card. This has been done in order that the card may be revised whenever necessary without making this section obsolete.

Reflections of a Commercial Studio.

We have received a very attractive booklet in colours entitled "The Reflections of a Commercial Studio," published by the firm of Greenly's Ltd., 37-38 Strand, W.C.2. What strikes us particularly about this brochure is the extremely practical way in which it is laid out. Each page in its entirety has been devoted to illustrations and a short informative article on one specific form of advertising, such as letter-headings, booklets, mailcards, posters, etc. We feel sure that any firm will find this booklet extremely helpful in suggesting further or new means of advertising for their business. We understand Messrs. Greenly's will be glad to send a copy to any firm which writes for one on their business notepaper.

Facilities in New York for British Business Men.

Facilities are now available to the representatives of United Kingdom firms visiting New York at the offices of the British Empire Chambers of Commerce in that city. The Chamber, which has recently taken new premises in the Cunard Building, 25 Broadway, has arranged for the formation of a sample room where British commercial travellers can, for a moderate charge, exhibit their goods, take orders, obtain office facilities and clerical assistance, and generally make it their headquarters during their stay in New York. Firms requiring the use of the sample room should communicate with the Chamber well in advance, at the same time furnishing a list of their American customers, to whom the Chamber would then issue official invitations to meet the representatives at a fixed date. It is understood that the Chamber would also render assistance, if desired, in the issuing of circulars or in the distribution of catalogues and literature on basis of cost. The charge for rent will be 10 dols. per day per room, inclusive of light and heat.

New Inventions

Latest Patent Applications.

15409.—Palmer, R.—Reinforced partition slab. June 1.

Specifications Published.

179975.—Wilkins, H.—Concrete blocks and the like.
180150.—Abraham, A.—Roofing shingles.
180169.—Wilkie, W.—Concrete blocks or stones for building purposes.

Abstract Published.

178244.—Block flooring or paving.—Butler, J. D., 6650 City Avenue, Philadelphia, U.S.A.—Wooden or other blocks for flooring and paving are provided with mating interlocking-members, each block being fitted with a pair of these members, one on each side. Along each side of a block 10 is a dovetail groove, the corners 13 of which are deeper than a rib 14. Interlocking-members 20, 21 of sheet metal each have edge walls 24, 25, which fit into the grooves in the blocks, and an outer wall 23. Each member has at one end of the wall 24, 25 integral prongs, which prevent longitudinal movement in one direction of the member relatively to the block. The two members for each block are driven into their grooves from opposite ends. The members 20 have tongues 31, which pass through slots 29 and engage behind bridges 30 formed in the members 21, bent ends 31^a of the tongues 31 wedging against the ribs 14. The bottom of each block 10 has dovetail grooves 17 for keying with cement or asphalt 19. The blocks are kiln-dried and treated with oil, and may be of long-leaf Georgia pine.

FIG. 4.

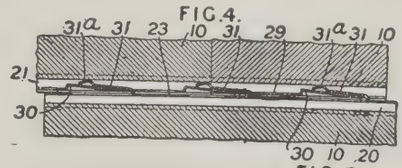
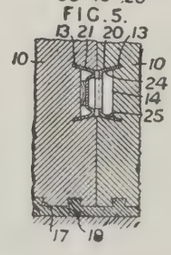


FIG. 5.



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Anniversary Celebration of Abbé Suger

The eight-hundredth anniversary of the consecration of Abbé Suger, the statesman-architect who built the abbey church of St. Denis, has been celebrated in the church which constitutes his memorial. Abbé Suger was born in 1081, and, although he came of modest parentage, he became the director of the business affairs of the great Abbey of St. Denis, and later the Abbot. His influence grew to such an extent that he became the Minister of Louis VI, and from 1130 to 1137 he played a most important part in the affairs of the State. He was able to quadruple the revenues of the Abbey, and ordered the building of the choir, nave, and porch of the present basilica. When, in 1147, Louis le Jeune went on a crusade, Abbé Suger was left as Regent of France. Since Abbé Suger's architectural triumph was taken as a model by church builders throughout Western Europe, the ceremony was not exclusively religious, the Académie des Beaux-Arts being represented by two of its members as a tribute to the man who evolved the early Gothic style from the earlier Roman, employed by the Norman Church builders.

British Trade in Netherlands

His Majesty's Consul-General at Rotterdam has forwarded to the Department of Overseas Trade the following particulars of undertakings and events which may possibly lead to openings for British trade: A serious fire broke out in the works of "Werkspoor," the largest engineering works in the Netherlands. The greater part, consisting of pattern shop, turbine workshop, locomotive shops, model stores, and welding shop, has been destroyed, together with part of the foundry. The greatest damage has probably been caused through the destruction of the turbines for the Dutch cruiser "Sumatra," and of the engines destined for the steamer "Bontekoe," of the Koninklijke Pakervaartmaatschappij. A large number of Diesel engines have also been lost. The Arnhem Town Council has granted a credit of Gld. 70,000 for the conversion of two furnaces at the gasworks; a credit has also been granted for the buying of a coke-breaker with sifting device for the municipal gasworks. Estimate (including other works) Gld. 8,000.

America's City of Glass

A "city of glass" is the latest craze of the Americans. In the State of New York it is proposed to erect a steel-framed structure enclosed by glass, under which will be built a number of villas. In addition to detached villas it is proposed to erect a number of artistic composite buildings wherein families will be able to reside in compartmented sections each provided with a balcony overlooking tree-lined streets. In each of these blocks there will be stores, swimming baths, and other conveniences, and each one will have a Radio Hall. Cinemas, theatres, dance-halls, and pleasure palaces will provide all the amusement that may be required during the week, and churches for all denominations will be found within the walls of glass.

Obituary

The Late Mr. E. R. Tate.

It is with deep regret that we announce the death of Mr. Edwin Ridsdale Tate, of York, architect and artist, at the age of sixty-one. Mr. Tate was a native of York, and his early professional experience was acquired there. He was a student at the local School of Art, and was a silver medallist under the Science and Art Department, South Kensington, also gaining a gold medal in a drawing competition open to England and the colonies. He met with much success in ecclesiastical design, and as an archæologist and antiquary was much at home in the restoration of ancient buildings. He also possessed considerable ability as a black and white artist, producing some very charming interiors of York's ancient buildings. He left York to enter the office of Mr. Ferguson, a London architect, and had a good deal to do with the restoration of Bamburgh Castle, Northumberland. After being in practice on his own account in Wandsworth and Carlisle he returned to York some twenty years ago. He had much to do with the designs of the properties for the York Pageant of 1909, and the excavations at St. Mary's Abbey, York. He performed some important work in connection with Selby Abbey Church, and in recent years had designed many war memorials.

The Late Mr. R. S. Besant.

The death has occurred, suddenly, of Mr. R. S. Besant, of 80a Stanpit, Christchurch, a retired architect, at the age of seventy-one.

Up to a few weeks ago he had been residing at Sutton, in Surrey, and later removed to Bournemouth. Death was attributed to heart disease.

Coming Events

Wednesday, June 21.

R.I.B.A. Public Lecture. "The Continuity of English Architecture." By Mr. W. H. Bidlake, M.A. (Cantab.). 5 p.m.

Saturday, June 24.

Architectural Association Summer Visit to Rushymead, Coleshill, Amersham, Bucks.

Monday, June 26.

R.I.B.A. Presentation of Royal Gold Medal. 8.30 p.m.

Friday, June 30.

The Art Workers' Guild, 6 Queen's Square, W.C.1.—Ladies' Night. "The Art of Dressing and Presenting Food."

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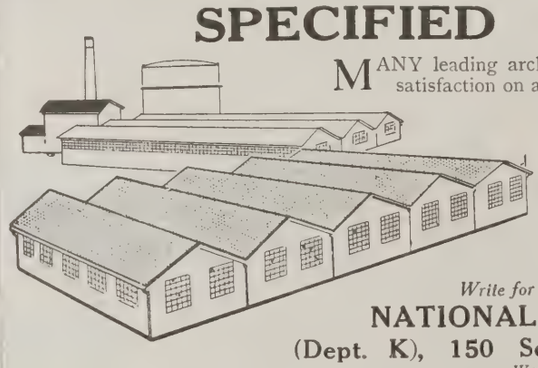

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Electrical Notes

Industrial Lighting

MR. L. GASTER, in reading a paper on "Industrial Lighting, Ideal Requirements (Legislative and otherwise), and Practical Solutions," before the Illuminating Engineering Society, said that it is generally admitted that great advances have been made in our knowledge of industrial lighting requirements during recent years. The introduction of simple instruments for measuring illumination has given us an insight into the values of illumination customary in different factories. Researches have been conducted into the causes of glare and its prevention, the best ways of eliminating troublesome shadows, and the special requirements of certain industrial processes. We stand in a very different position from what we did when the Society commenced its work thirteen years ago.

These advances paved the way for the preparation of official recommendations, such as those contained in the First Report of the Departmental (Home Office) Committee on Lighting in Factories and Workshops in this country (1915) and supplemented in the Second Report issued last year (1921). In the United States there are now seven codes of industrial lighting in existence, all based on principles commonly accepted by experts.

The natural course is, firstly, to form some conception of ideal factory lighting; secondly, to see how far such conditions can at present be obtained in practice. Ideal industrial lighting can only be very broadly described. It should be such as to enable work to proceed at night with the same ease and convenience and safety to workers as exist under the best daylight conditions; indeed, in view of the variability of daylight, one might conceivably attain even better conditions in certain cases. General experience, aptly summarized in the reports of the Home Office Departmental Committee, indicates that for ideal requirements there are four main conditions to be satisfied, namely: (*a*) Sufficient illumination; (*b*) Constancy and Uniformity of illumination over the working area; (*c*) The placing and shading of lights so that no inconvenience and prejudicial effects are experienced from "glare"; (*d*) The placing of lights so as to avoid inconvenient extraneous shadows on the work. There will naturally also be special conditions to be fulfilled arising from the peculiar nature of any industrial process, and a form of illumination that is ideal for one process may be less satisfactory for another.

How, it may be asked, can we ascertain what working illumination is requisite? The most convenient plan is to collect statistics of prevailing values in existing factories; this tells us what is practicable and usual, but not necessarily what is best. A more scientific method is to experiment with different illuminations, asking the workers to state when they consider the illumination sufficient for their needs, and to indicate when the light is diminished to a point where they begin to find trouble in doing their job. One might supplement such tests by records of output under varied lighting conditions. This has recently been done in Chicago, with the result that in some factories better illumination led to increases in output of 8–25 per cent., while in others, where the original conditions were very bad, increases of as much as 30–100 per cent. were noted.

It is evident that the collection of such data means a considerable amount of work. When we come to consider closely other factors, such as avoidance of glare, we again meet complex problems. If we could devise a simple test of glare, the problem would be easier. Some work in this direction has been done, e.g., by judging the appearance of "after-images" on the retina of the eye, by observing when a fine line seen against the source as a background appears blurred, or when some fine detail becomes indistinguishable owing to the brightness in its vicinity. We may also fall back on accumulated experience of conditions under which a distinct feeling of uneasiness is experienced by the normal eye owing to glare, and prescribe rules as to the shading and positions with respect to the eye of light sources, as was done by Weber in a contribution on this subject very early in the history of our Society.

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Wednesday, June 28, 1922. Vol. LV. No. 1434

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal"

SHEPTON MALLET WAR MEMORIAL.
C. F. W. DENING, F.R.I.B.A., R.W.S., ARCHITECT.

27-29 Tothill Street, Westminster, S.W.1.

Modern American Architecture. 35.—New York Public Library: Detail

Carrère and Hastings, Architects

This view shows a characteristic detail of the front elevation of the New York Public Library, the commission for which was won in open competition by Messrs. Carrère and Hastings. It is a building notable alike for its fine scale and the richness of its decorative detail. The late Mr. John M. Carrère regarded it as the most successful work with which he had been associated.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

Wednesday, June 28, 1922 Volume LV. No. 1434

Wanted, an Entente Cordiale for the Building Industry

LAST week—on June 20, to be precise—the Engineering and the National Employers' Federations published the welcome announcement that the dispute with the operative engineers was at length at an end, and this cheering item of news concluded with the optimistic comment: "Now that the lockout is completely lifted, the industry, it is expected, will quickly recover." No doubt the wish is father to the thought, which, however, seems a little over-sanguine.

Most students of industrial problems, including those active participants in industry to whom the high-frequency current of strikes and lockouts brings only too much leisure for quiet study, will eagerly share the hope, but will lack confidence in the anticipation; for they can but have noticed, with considerable misgiving, that the engineering operatives have accepted defeat with more than the customary sullenness: feeling that, as one of their leaders expressed it, they have been forced to yield "at the pistol's point," muttering the while, that they "mean to get their own back," that it will be their turn next, and much more to the same effect. They are not satisfied that they have been fairly beaten on a straight issue, but that their downfall is due to their depleted war-chests. What is even more ominous than the muttered threats of reprisals is the quite open acknowledgment by the operatives that they would have taken a similar advantage of a similar opportunity of "scoring off" the employers. The defeated men even talk freely of "the fortune of war."

But why should industrial war be so frequent that men are able to speak of its fluctuating fortunes? A short answer is, "Because of the hardness of men's hearts." True, that answer is ethical rather than industrial; and alas that ethics and industry should be so often regarded as separable and distinct! Those who try so hard to effect this estrangement seem to think that the industrial problem should be kept alive by an unending process of mutual strife and recrimination. They believe the industrial problem to be incapable of solution, because they have been trying to solve it by a wrong method productive of nothing but recurring decimals that stretch out to infinity without yielding any tangible result.

Can we not shorten the process by "cancelling out"? Is it not possible, for instance, to eliminate unnecessary and awkward factors such as ill-temper, bad blood, and other ugly incidents? In a remarkably outspoken and keenly perceptive article, which we print in the present issue, an architect, grappling vigorously with the problem, indicates very clearly and forcibly how the *Entente Cordiale* could be secured in the building industry, and, *a fortiori*, in industry generally; for unhappily the building and the engineering industries have been always distinguished beyond all others by their addiction to ruinous industrial strife, setting the other industries a disastrous example.

Our contributor holds that the root cause of labour disputes—especially of those in the industry which, as an architect, he has had the closest opportunities of observing—is "lack of education." He means, and he says in so many words, that "the working classes have never been taught to think." (Nor, apparently, have the employing classes; but that aspect of the case will be dealt with a little further on.) The workers leave school too early for the acquisition of that difficult art; and let it be whispered that the unmanageably large classes in which they are herded must certainly militate against thorough teaching of any sort. And so, leaving school prematurely and before they could possibly have acquired even the rudiments of the thinking habit, they are let loose upon industrial problems that require acute thinking capacity for their equitable adjustment. No wonder that the young operative, not having learnt the noble art of "thinking straight," is defenceless against the wiles of his misleader, who, being in like case with himself respecting soundness of knowledge and capacity for logical and just judgment, differs only in a glibness, natural or acquired, foments the prejudices, misapprehensions, suspicions, and fears that are born of ignorance and imperfect mental training.

Now for the employers. Our contributor admits, with commendable candour, the general and deplorable ignorance of the employers also. Having had superior opportunities of mental training, the employers may be credited with the capacity to understand the principles involved in industrial problems; but to what extent do they put themselves to the trouble of trying to understand the mentality, the psychology, the idiosyncrasies of the workers?

These delicate matters do not receive sufficient attention, and that is the root of the trouble. The workers are left to gather the impression that their employers have no interest in them except as mere "hands," expected to yield a remunerative return for wages. Hence the relations between employers and employed have become to such an appalling extent dehumanized. Employers and employed seldom meet for social enjoyment (but there are certain building firms that have set an excellent example of social amenity), and consequently there is on both sides a sad lack of sympathetic understanding. The interest of employer and employed in each other is too often entirely sordid, and their attitude towards each other is commonly that of scarcely veiled antagonism.

This attitude bodes ill for the welfare of the building or any other industry, and ultimately may wreck the prosperity of the nation. Our author is probably mistaken in regarding the "love of money," which plays so conspicuous a part in this mutual antagonism, as being "peculiarly English." Mammon worship is not confined to the English. It is a world-wide disease; what of the "almighty dollar"? That, however, is a side issue. Our author's main point is that lack of education, and the worship of the Golden Calf, are at the root of industrial strife—that employer and employed are so intensely concentrating on money interests that they ignore certain vital principles.

Does the employer pay sufficient attention to welfare work, and to the promotion and reward of good craftsmanship? Does the bricklayer, mason, carpenter, painter, take as keen a delight as his forbears in good work, regarding fine craftsmanship as a major detail of the joy of living? The instances of such survival of soul in a sordid age are all too rare. The average workman's one object usually seems to be to get his wages with as little effort as possible—at least he conveys that dismal impression, whether he is observed to be planing a board, laying a brick, daubing a surface, or carrying a hod. And the less interest his employer takes in the craftsman, the less interest will the craftsman take in his work; the instances are far too numerous in which it is only the presence of the clerk of works that prevents scamping.

Our contributor revives—not expressly, but by implication—our own frequent contention that architects stand too much aloof from the builders; and his suggestions for a new and more really representative Builders' Parliament to rise on the ashes of the old should be taken to imply that architects should be more fully represented on it and take a much keener and more active interest in its proceedings. As moderators in that assembly (and architects are by training mediators between man and man) they might help the employers to remember that operatives have souls as well as bodies, minds as well as muscles. If also the architects could persuade the operatives to take a pride in their craftsmanship, and could persuade employer and employed to quit sordid and selfish concentration and think better of each other, they would bring about the much-desired *Entente Cordiale* in the building industry.

Mr. Thomas Hastings, Royal Gold Medallist

It is customary in America, we believe, even more than among ourselves, to make a rather heavy discount from formal eulogy. This rule should be suspended in favour of the excellent eulogy on American architecture in general, and on the work of Mr. Thomas Hastings in particular, which the President of the R.I.B.A. pronounced in delivering to Mr. Hastings the Royal Gold Medal. This is an instance, exceptional though it may appear, in which there is no margin whatever for discount, even if allowance be made for the difference in the rate of exchange of international compliments. Every word that our President said came straight from a speaker to whom every kind of insincerity is utterly abhorrent. It would be quite unnecessary to say this except for the reassurance of American friends who, lacking the advantage of studying our President at close quarters, may feel inclined to suspect that discourse of such extraordinary grace and polish can only be achieved at some slight expense of sincerity. With our President this is never so; and on this occasion he was obviously expressing—not at all extravagantly, but even with some little "artistic restraint"—the admiration that we all feel for the great achievements of America in architecture, and for the splendid work that Mr. Thomas Hastings has done as a member of the world-famous architectural partnership of Carrère and Hastings. Mr. Hastings is the third in what we trust will be a long line of American recipients of the Royal Gold Medal, the compatriots preceding him being Mr. Richard Morris Hunt in 1893, and Mr. Charles Follen McKim in 1903.

Coloured Buildings and Coal Smoke

On the colour question, Mr. Halsey Ricardo very dexterously improves the shining hour. Combining high springtide with the colour competition recently held by the R.I.B.A., he enforces the moral that when, as the old song has it, "the face of all nature looks gay," our buildings ought not to look dingy. He cites also the example of Magdeburg, whose "inhabitants, smarting under the criticism of the dullness of their town, are busied now in brightening their churches, public buildings, and houses, with gay colouring, in order to please their æsthetic sense, and to remove the reproach they are unwilling to suffer any longer." He urges that in London there are many stucco-faced buildings which, having to be periodically repainted, should not be coloured in accordance with individual fancy or the terms of a lease, but in co-operation with neighbours, so that a terrace or a block of buildings should be treated as an architectural entity, restoring the original conception of a group designed as such. London has too long suffered from a deliberate cult of dinginess, which has been too often defended as the proper hue for our sombre and soot-laden climate. Now, however, a decided reaction in favour of colour has set in, and Mr. Halsey Ricardo is to be congratulated on his persevering advocacy, not only now, but during many years, of the redemption of our towns from drabness. But first of all they should be redeemed from coal-smoke pollution, which is the deadly enemy of colour; and the brighter the colour the more fatal the attack.

Pick and Crowbar Superseded

Londoners are awakening to the fact that the pick and crowbar are being superseded. On Ludgate Hill a few weeks back, and just now in Waterloo Place and elsewhere, the roadways have been torn up with extraordinary speed by implements attached to portable power engines. Here and there in the suburbs it is still possible to observe three lusty hammermen driving in with sequent sledge-hammer blows the reluctant wedge between the "setts," but this extraordinarily slow and laborious operation must soon give way before the power-driven pick, and the architect, and other persons conscious of insufficiently exercised brawn, will soon lose occasion to envy the hammerman his magnificently developed biceps. But for lawn-tennis, bus-jumping, straphanging, and suchlike strenuous sports, our muscles would soon become vestigiary. What with steam-navvies, "general joiners," sawing and planing machines, mechanical stone-dressers, tar- and paint-spraying apparatus, block-making machines, trench-diggers, mechanical bricklayers, and what not, building operations of every kind will presently be "all done by machinery," the architect directing operations by "wireless."

"On the Up Grade"

The expression "on the down grade" had become so familiar with respect to building interests that most people had forgotten, if ever they knew, that the dismal Americanism has a more cheerful counterpart. From Toronto it is reported that "building conditions are on the up grade," and one can but condone, and even welcome, so exhilarating a phrase, uncouth though it be. Our excellent Toronto contemporary "Construction" has the happiness to record that the aggregate of construction contracts "awarded the Dominion" (whatever that may mean) in April amounted to approximately thirty million dollars—more than twice as great as in the preceding month, and one-third greater than in April 1921. In Toronto, our contemporary states, the total for building permits issued during the month was with one exception the highest reported in the history of the building department. It is an all-round development, affecting all classes of building—dwellings, churches, schools, and commercial premises. This report is the more interesting because such news can never be merely local. Sooner or later England will share in the building activity on which we now take leave to congratulate Canada.

Presentation of the Royal Gold Medal to Mr. Thomas Hastings

On Monday evening last, at the Royal Institute of British Architects, the Royal Gold Medal was formally presented to Mr. Thomas Hastings (the distinguished American architect, and surviving partner in the firm of Carrère and Hastings), when Mr. Paul Waterhouse, P.R.I.B.A., delivered the following address.

IT will be of very little interest to Mr. Hastings to be told that he has been the author of fifty works of really first-class importance, that six or more of these were of parliamentary or municipal consequence, that the remainder are libraries, university halls, banks, railway stations, hotels, bridges, monuments, as well as vast town-planning schemes; or to be reminded that the buildings so enumerated comprise only those which have been thought conspicuous enough to put into a list. I have little doubt but that the unrecorded remainder would be sufficient to make two or three European architects contentedly rich and reasonably famous.

What may affect Mr. Hastings, and what does affect us, is the supreme significance in modern history of forty years' work such as his.

I am perfectly sure that the opening words of any reply which Mr. Hastings is good enough to give us to-night will be a modest disclaimer. He will say that we are asking our King to honour his epoch and his country, and that the allocation of this honour to his individual personality is a mere accident. Let him say so. He will not thereby shield himself from the direct attacks of our respectful homage, nor will he dilute or divert in any degree the enthusiasm with which we acclaim him as the man of the hour.

PORTRAIT OF MR. THOMAS HASTINGS.
(From the Painting by Miss Mary Foote.)

It is perfectly true that we are consciously applauding America of the twentieth century. But what of that? It is the architects of America who make American architecture, and in searching for a true and significant example of that group of creators we have—with very great, very careful deliberation—thrown our choice on Mr. Hastings.

I think we will stand firm in support of our own judgment. Mr. Hastings can diffuse, as much as he pleases, our compliments among his able countrymen, so long as it is on his neck that the King's Gold Medal crosses the Atlantic, and so long as he is our most respectfully chosen ambassador.

The very fact that Mr. Hastings is surrounded in the States by confrères whose aims are his own, the very fact that there are others in his favoured country who may rightly be classed as of Gold Medal rank, only enhances, I hope, the honour which we try to pay to him and through him to his colleagues, many of whom are men to whom his example, his rivalry, and his instruction have meant much.

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I make no apology for being, by the accident of the Presidency, the man through whose hands the medal passes from its gracious giver to its distinguished recipient. Rather do I with complete immodesty rejoice that so great a piece of good luck falls in my way, for I have wanted, above many other wants, to stand face to face with an American and tell him exactly what I think of the present day school of American design in architecture.

I believe, with a very profound belief, that it represents a most significant fact in the history of our art. I do not say "of our age," but of that ageless company of centuries which, viewed from Art's point of view, stand not behind one another in series, but abreast. There is a reality called Eternity. Some define it as time with the beginning and the end removed. They define it falsely. It is the great Now. It lies with architects more than with other artists, it lies with artists more than with other men, to realize (and this is a realization shared with religion) that the brotherhood of man has its extension forth and back in time no less than East and West in space.

This is not wandering on my part. I could make it plainer by detaining you with a history of civilization (if I were capable of it). I would sooner try to make it plain by talking about the United States.

There is much heretic talk of progress in architectural design. There *is* progress, of course; but there is much more evidence of the sham progress which is no friend of art at all. The horrible experiment to which a certain old-world country is submitting herself, the experiment of attempting an architecture "free from historic style," would be a nightmare to Europe and a grim menace to all lovers of the beautiful were there not a bright hope that so foul a conflagration will soon burn itself out.

Let us turn happy eyes to America and take to our hearts the remarkable testimony she gives to the divine sovereignty of tradition.

America is of all countries the land whose civilization was unprejudiced—a vigorous population on virgin soil found itself free to look forward without any obligation to look

Modern American Architecture. 36.—The New York Public Library: Detail of Rear Elevation

Carrère and Hastings, Architects

The rear elevation of the New York Public Library has a distinctive character of its own. It is interesting as a direct architectural expression of plan, and for the clue it affords to the internal economy of the building. The canopied structure in the foreground has been provided as a setting for a public memorial.

back. There was the country of all countries in which could flourish unhindered and undismayed that traditionless architecture which is the dream of some of our philosophers.

But what has come to America in her freedom? What, after the early flutterings of untried wings, has been the direction of her flight? What star guided her? What voice prompted her? None other than the star of that civilization which leads and has led old Europe, no voice but the voice of the ancients.

Gentlemen and ladies, were there ever wanting some proof that our happy bondage to the ways of our forefathers is not a bigot's delusion, but a free man's song of liberty, that proof is given to us by the choice of America—or shall I say rather by America's joyous submission to the golden chains in which we also labour?

In the name, Mr. Hastings, of our Gracious King, and as the spokesman of my brother architects of England, I transfer to you the greatest testimony we have to offer; and, in doing so, I thank you and your colleagues in America for the encouragement you give to our ancient art, and congratulate you with the warmest cordiality on the fact that your line of thought, your line of work, and your spirit of achievement are the very spirit, work, and thought that have for centuries bound into a timeless brotherhood the architects of Europe.

(A report of the subsequent proceedings will appear in our next issue.)

Some Notes on the Life and Work of Thomas Hastings

MR. THOMAS HASTINGS, who is a Doctor of Laws, was born in New York City, of American parents, in the year 1860. His grandfather, Thomas Hastings, was distinguished as a composer of sacred music. His father, the Reverend Thomas S. Hastings, an eminent Presbyterian divine, was for many years President of the Union Theological Seminary of New York City. His mother was a Miss de Groot, an American of Dutch and French parentage. Mr. Hastings obtained his professional education at the Ecole des Beaux-Arts, Paris, where he took the full course in the Department of Architecture under the professorship of Jules André. He began his architectural experience in the office of McKim, Mead, and White.

The auspices under which Messrs. Carrère and Hastings began their career (it may be recalled that Mr. Carrère died in March 1911) were almost the same as those of McKim, Mead, and White. Hunt had already exerted his personal influence on behalf of architects, but had not done much by his work to elevate architecture. Wotan, in the person of Richardson, was building Walhallas in every city, which reflected very accurately the public taste of the time. McKim, Mead, and White had emanated from the office of the latter, and, though trained previously in Paris, their work, at first, displayed traces of Richardson's influence, and, later, of Hunt's.

Two or three years after the formation of the firm of McKim, Mead, and White, and at the time when their work first began to show a leaning to the refined styles of the Renaissance, among the factors in the production of these designs were two of their leading draughtsmen, who were each in charge of important work. These draughtsmen were John M. Carrère and Thomas Hastings. In the year 1885 these two entered into a partnership and began to look about for "something to do."

NEW YORK PUBLIC LIBRARY: THE READING-ROOM.

"Something to do" turned up in the form of a request for a "pretty picture" of the outside of an hotel which Mr. Henry Flagler was about to build at St. Augustine, Florida, the idea being that some local builder was to do the "practical work" of making the plans and details, and that the young architects were to make elevations "to fit." When the builder began to set out the work he began to discover "mistakes" in the architect's drawings (the customary attack of the American country builder upon the young architect); but instead of leading to their summary dismissal it brought Mr. Carrère to St. Augustine, and after proving the accuracy of the drawings he and his partner Hastings were commissioned as architects to design and supervise the Hotel Ponce de Léon. This led to other work, and at St. Augustine they remained for a period of three years, designing and supervising the erection of the Ponce de Léon, the Alcazar, the Methodist and the Presbyterian churches. This work was completed before the inception of the Columbian Exposition of Chicago, and was notably in advance of anything which had been produced in America up to that time. Then came "studies for" a crematory, a necropolis for Brooklyn, and a few other ideal studies and sketches for proposed or executed work, including a design for a fine country house—perched upon a hill—for Mr. C. H. Tenney, at Methuen, Massachusetts. The great competition for the Cathedral of St. John the Divine, in New York, produced more than one masterpiece—including a wonderful Romanesque design by Harvey Ellis. The assessor, Professor Wm. R. Ware, placed first the Renaissance design by Carrère and Hastings. This assured for them a permanent leading position among the architects of the United States.

The design for the cathedral was, however, too far ahead of the times; the building committee was not yet advanced beyond the taste for the work of the school of Richardson, and another design was selected by the committee for execution.

Both members of the firm having been trained at the Ecole des Beaux-Arts, where they spent several years, their sympathies were always with the broad and comprehensive lines laid down at the French school. In their relation to public affairs connected with art they have been enthusiastic exponents of the methods of the Ecole des Beaux-Arts and all that it stands for, and they have contributed largely toward the remodelling of the American educational system in the principal universities on parallel lines with those of the French school.

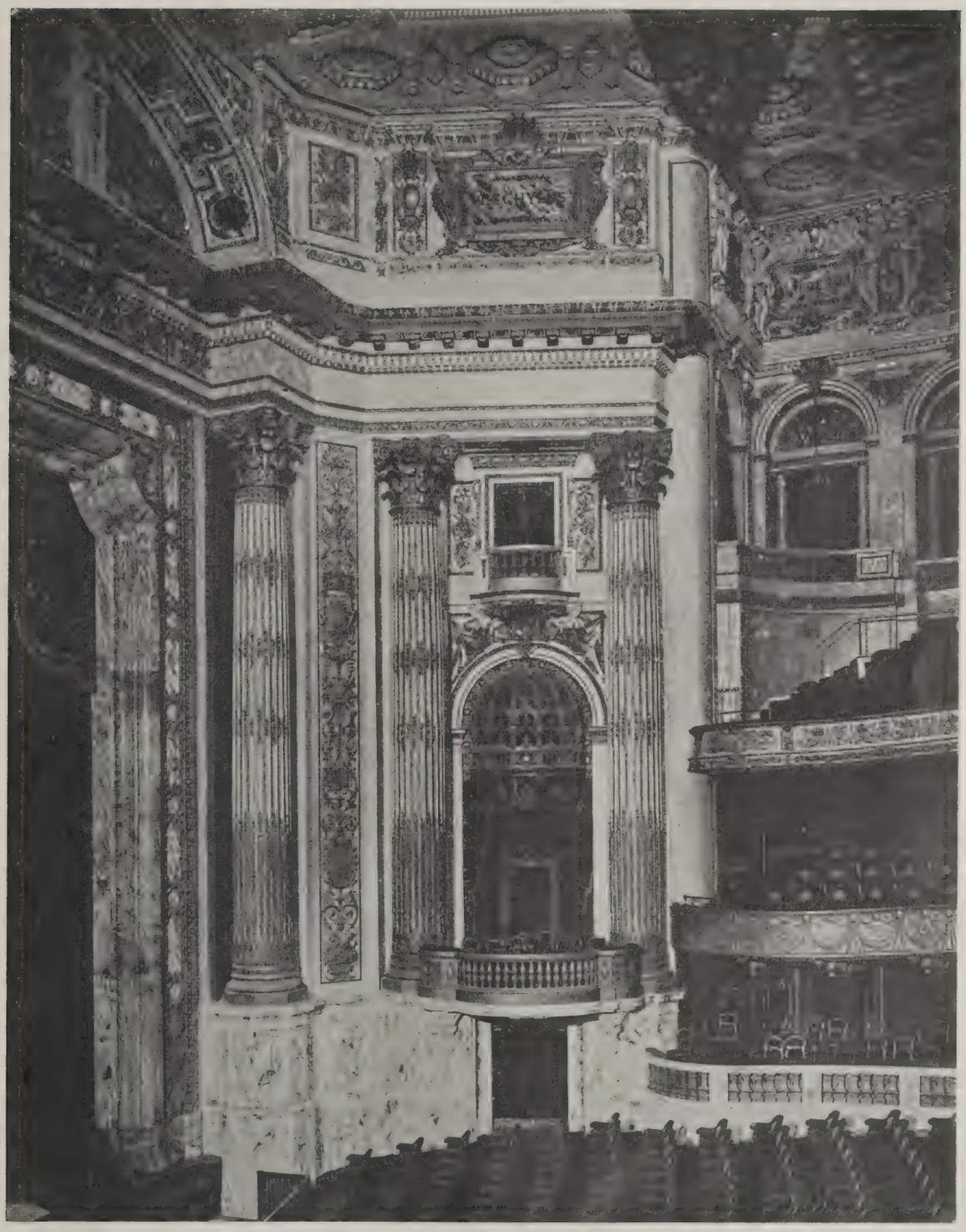
Their work, which has been executed in every part of the United States and Canada, has been designed on the theory that American architecture needed traditions, and that it should go back, as its point of departure, to the last consistent and really successful period of the Renaissance, the eighteenth century, for its inspiration and its lessons, holding that the development of architecture follows a natural course of development or evolution parallel with the commercial, political, social, and ecclesiastical development in history; and while not disregarding the influence of the periods succeeding the eighteenth century, their theory has been to take up the thread of the evolution where it was broken and to endeavour to carry it on, and in this their work has been consistent, and they have always been loyal and faithful to their theories.

Mr. Hastings has the following distinctions: Academician of the National Academy of Design; Member Academy of Arts and Letters (Trustee of same); Member Royal Vienna Association of Architects; Member of Committee of Visitors to Columbia University (Architectural Department); Chevalier of the Legion of Honour (decorated by the French Government); several times a Director of the

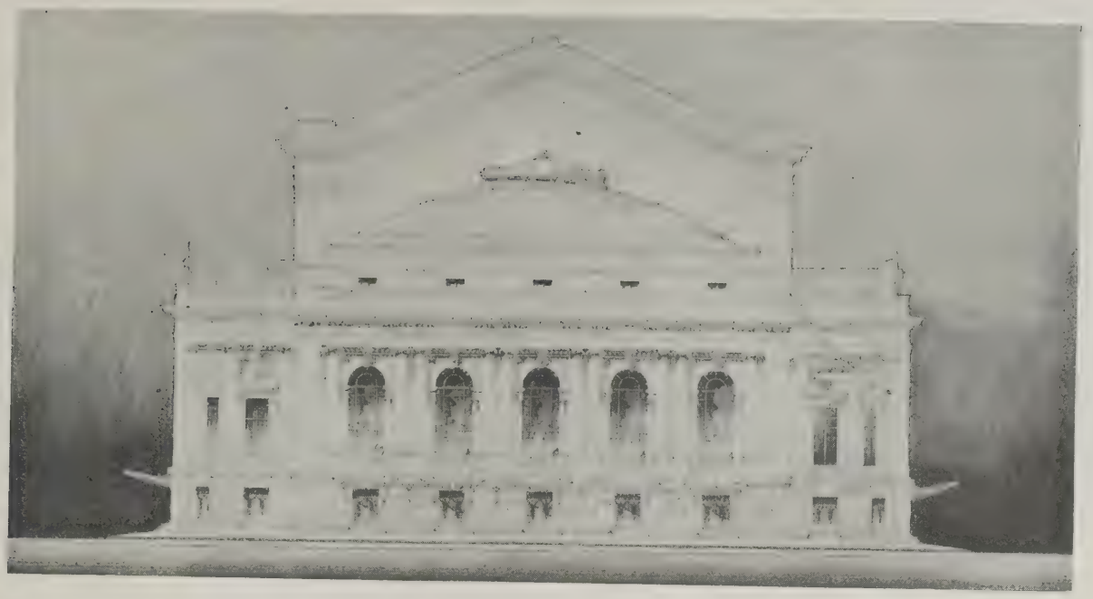
THE NEW THEATRE, NEW YORK CITY: CIRCULAR CORRIDOR AROUND AUDITORIUM

Modern American Architecture. 37.—New Theatre, New York City: View in Auditorium

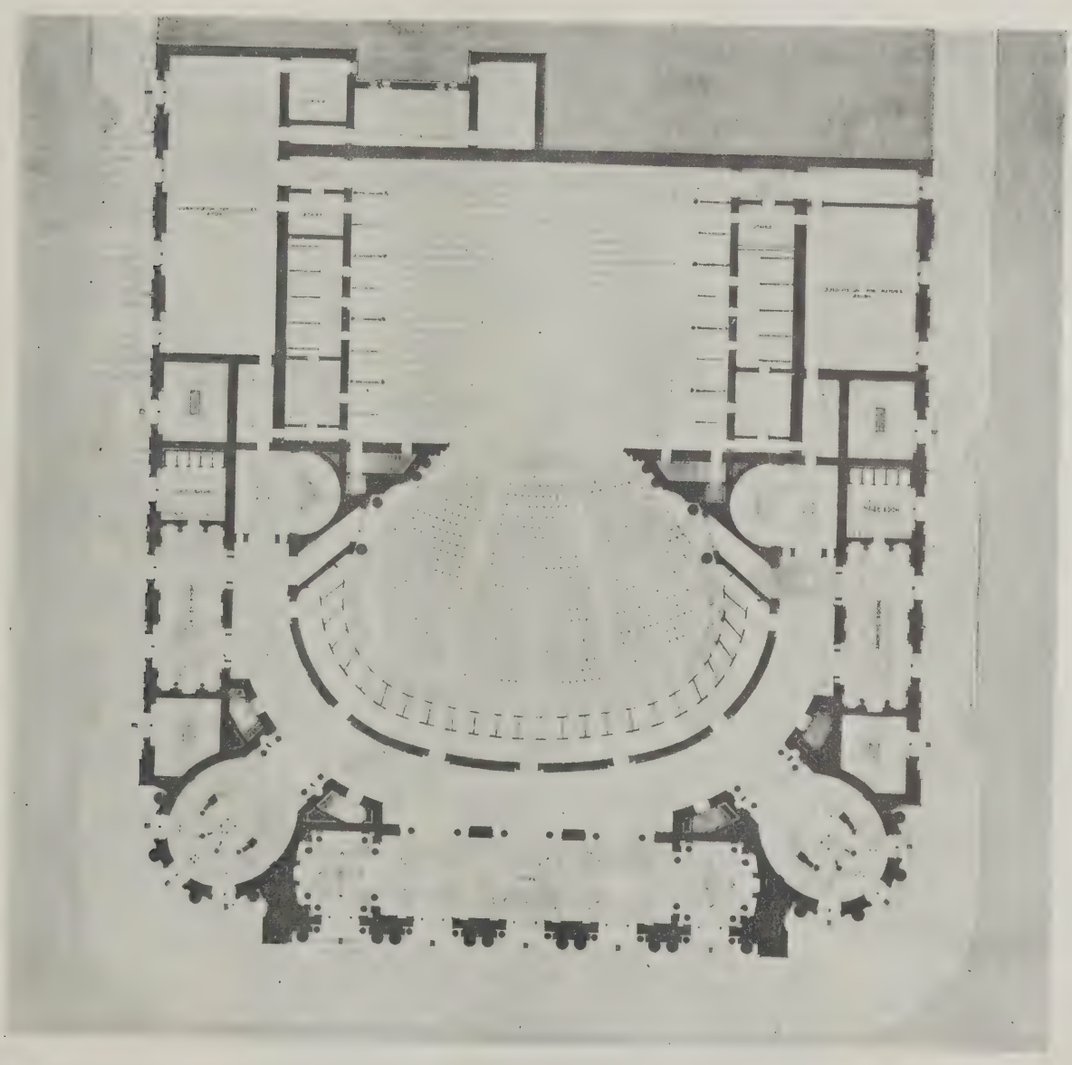
Carrère and Hastings, Architects



The commission for this theatre was won by Messrs. Carrère and Hastings in competition. The building is remarkable for the simplicity and directness of its planning, its great scale, and its wealth of internal decorative detail. Two of the original competition drawings are reproduced on page 915.



FRONT ELEVATION.



FOYER FLOOR PLAN.

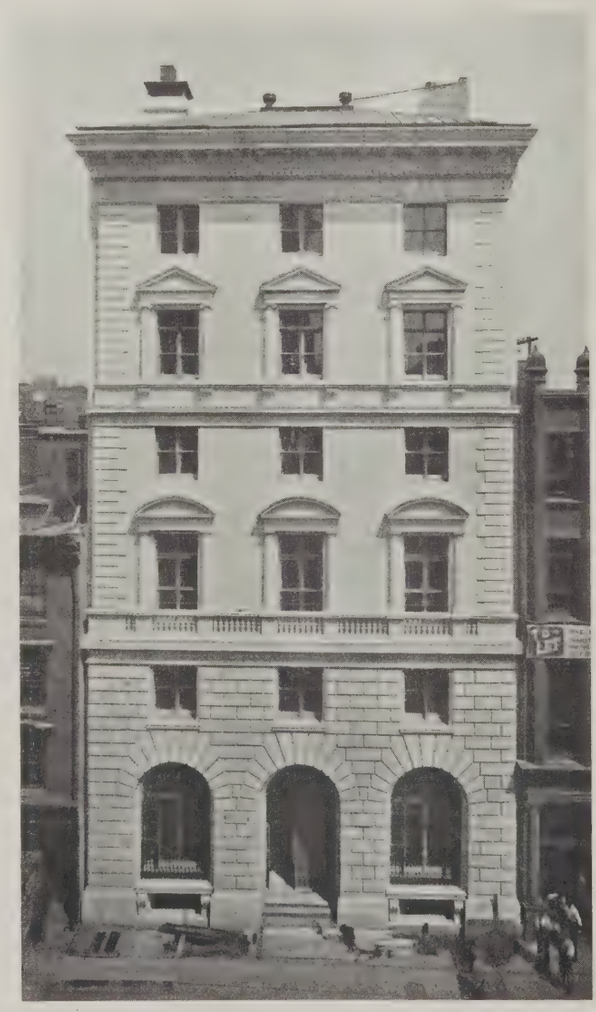
NEW THEATRE, NEW YORK CITY. CARRÈRE AND HASTINGS, ARCHITECTS.

HOUSE OF HENRY C. FRICK, 5TH AVENUE, NEW YORK CITY.

American Institute of Architects; Chairman, Sardis Exploration Society Commission; President, Beaux-Arts Institute of Design (graduate of Ecole des Beaux-Arts); one of the Founders of the Federal Art Commission; Chairman, Lincoln Highway Commission; Director in the Museum of French Art; one-time President of the Architectural League, one of the Founders, and several times a Director.

Following is a list of his principal works:—

New York Public Library, New York City.
Carnegie Libraries, New York City.
Lay-out of Baltimore, Maryland (Mt. Vernon Square and Civic Centre).
United States Capitol Extension, Washington, D.C.
Senate Office Building, Washington, D.C.
House of Representatives Office Building, Washington, D.C.
The Plaza at 59th Street and 5th Avenue, New York, City.
Century Theatre, New York City.
Globe Theatre, New York City.
Interior of the Metropolitan Opera House, New York City.
Academic Halls for Cornell University, Ithaca, N.Y.
Portland (Maine) City Hall.
Richmond County Borough Hall, Staten Island, N.Y.
Richmond County Court House, Staten Island, N.Y.
Staten Island Terminal, New York.
Manhattan Bridge over East River, New York.
Administration Building, Carnegie Institute, Washington, D.C.
City Plan of Hartford, Conn.
Union Pacific Railroad Stations, North Platte, Nebraska, and Grand Island.
United States Rubber Building, New York City.
Cunard Steamship Co. (Consulting Architect for New York Offices).



ROYAL BANK OF CANADA, TORONTO.

Standard Oil Company of New York, New York principal office building.
Bank of Mexico, City of Mexico.
One of six architects in collaboration on Panama-Pacific International Exposition, San Francisco, Calif.
Industrial Town plan for United States Steel Corporation, Duluth, Minn.
Ponce de Léon Hotel, St. Augustine, Fla.
Knoedler Building, Fifth Ave. New York City.
National Amphitheatre, Arlington Cemetery, Washington, D.C.
Bryant Memorial, New York City.
Yale Memorial Buildings, New Haven, Conn.
Princeton Battle Monument, Princeton, N.J.
City Hall Fountain Memorial, New York City.
McKinley Monument, Buffalo N.Y.
John Paul Jones Monument, Washington, D.C.
Lafayette Monument, Paris, France.
Altar of Liberty and Victory Arch for the Mayor's Committee for Homecoming Troops, New York City.
War Memorial for Atlantic City, New Jersey.
Cenotaph for Unknown Dead, Washington, D.C. (in course of construction).

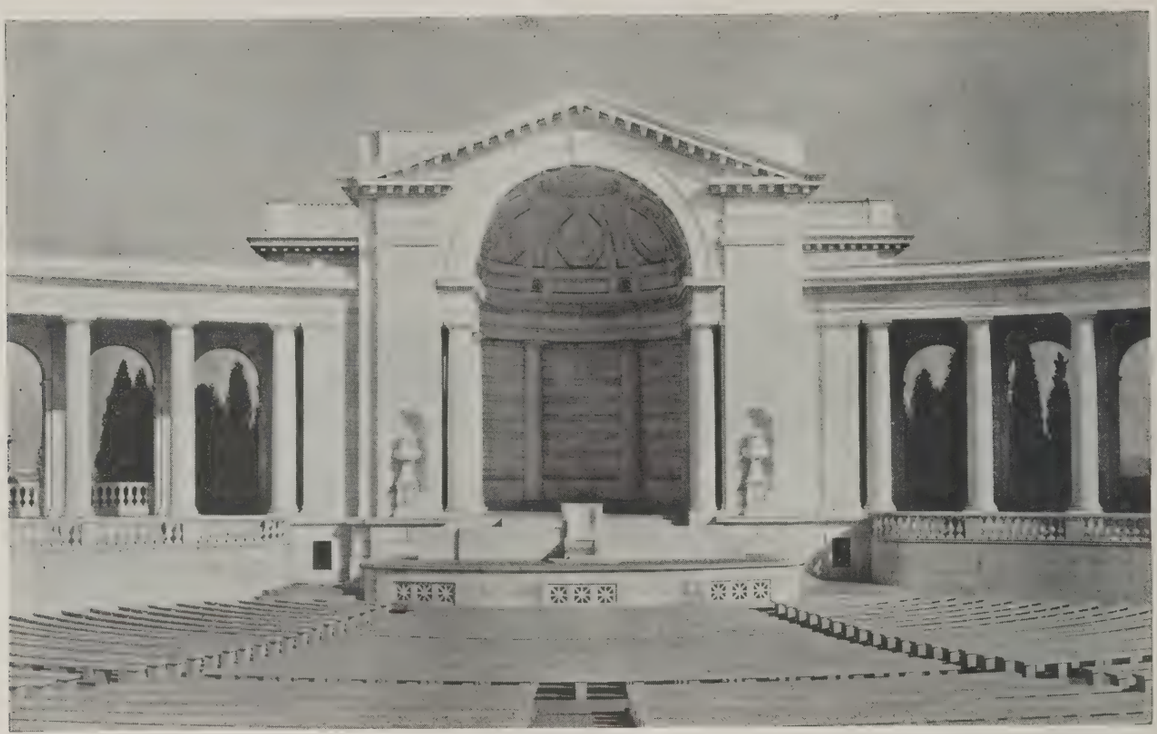
Numerous important residences, various churches in different parts of the country, and a number of office buildings for private corporations.

Modern American Architecture. 38.—Temporary Victory Arch, erected in New York to celebrate the Homecoming of the American Forces

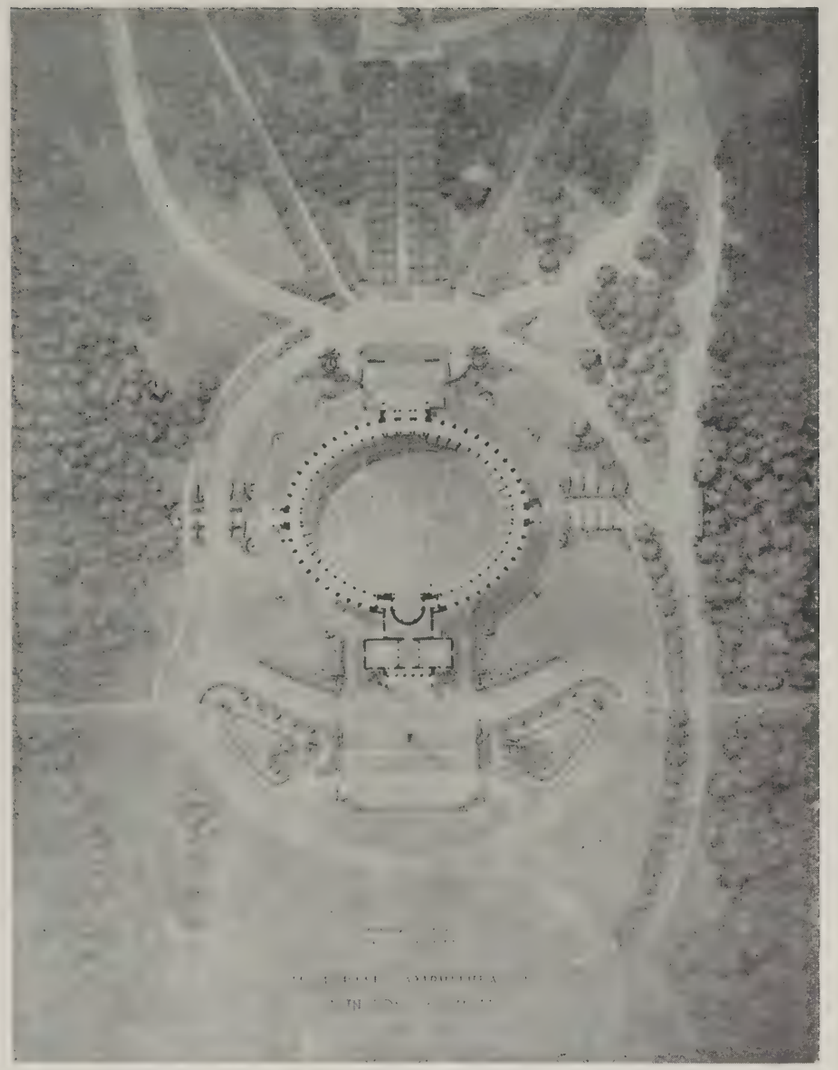
Carrère and Hastings, Architects

This arch is interesting not only as an example of commemorative design, but as an illustration of the vision and imagination displayed by the Americans in connection with the art side of ceremonial affairs. How differently we do such things in this country!

THE JOSEPH PULITZER MEMORIAL FOUNTAIN, NEW YORK CITY, AS DESIGNED AND AS EXECUTED.
CARRÈRE AND HASTINGS, ARCHITECTS.



MEMORIAL AMPHITHEATRE, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA.
CARRÈRE AND HASTINGS, ARCHITECTS



MEMORIAL AMPHITHEATRE, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA.
CARRÈRE AND HASTINGS, ARCHITECTS

GENERAL VIEW OF THE MEMORIAL AMPHITHEATRE, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA.
CARRÈRE AND HASTINGS, ARCHITECTS.

A Reminiscence of the Cardiff Conference

By G. LE MORGAN

It is so seldom that the lighter side can be introduced into architectural subjects, that those who attended the Conference at Cardiff, and more particularly those who were unable to be there, will read with amusement the appended comments which have been sent to us by a local contributor, who is apparently of the opinion that many a wholesome truth is the more penetrative for being barbed with an inoffensive jest.

IT is all over, and we can now settle down in Cardiff and endeavour to get work in the various offices started again. But it was good while it lasted, and well worth all the hard work and careful thought of the Conference Committee. We should have liked to see more visitors, we certainly expected more, but what they lacked in numbers they made up for in quality.

Big Buckland, from Birmingham, carrying a lot of weight in his discussions on matters architectural, but versatile enough to charm his neighbour at the banquet with lighter conversation and to draw him out to respond with gaiety.

Taliesin Rees, the man from Liverpool, who will talk Welsh if you happen to have a Welsh name, but who does not know the Welsh for "entasis" all the same. Fraser, the Liverpool President, and Holt, the Honorary Secretary. All three of whom encouraged us at the first conference in Liverpool, when we half-fearfully suggested Cardiff for this year.

Dear Old Man Hennings, from Manchester. We were afraid that he was not coming, but at the last moment he turned up and all was well. With him Francis Jones the Manchester President, both eager to renew their acquaintanceship with the Cardiff buildings, gained some two years or more ago during a strenuous week-end, and to meet again friends made at that time.

Vincent Harris, tickled to death at our distinctive welcome to a "visiting" as opposed to a "practising" architect, and laboriously spelling out the "warned off" notices planted on the remaining spaces for Public Buildings in Cathays Park. His masterly description of the Velum Celticum in the Glamorgan County Hall was received in respectful silence as was its due. Not a sound. Not even an echo. Ah, well. More power to his pencil, but "in another place," please.

Barnes, M.P.—that man of unbounded energy and unruffled mien. At one time calmly laying down the law on Unification, quite unperturbed by the ferocious glare of an "anti" in the very front row; at another time diving down a coal mine, miles away, but turning up at the banquet, smiling and quite clean, to deliver the speech of the evening.

Adshead, that other amateur collier, who, not content with planning "on the contour," must needs dive into the bowels of the earth to see if the "roads" there were laid out with a view to the amenities of the situation. Trabs, a beam, Adshead. I am afraid that you were not correctly reduced to scale before you went down. We shall have to get a coal mine specially built for you.

Arthur Keen—well, just Arthur Keen. That's how we know him in South Wales, and believe me it covers a multitude of virtues.

The President, essentially the right man in the right place, fitting his great office as a hand fits a glove. A busy man, the President, during his brief time with us, shaking hands and welcoming all and sundry, but not too busy to make a note of our Chief Constable's tips for Ascot: "Nostril if it runs," and "Loose Button, sure to come off." "Your visit all too short, sir. But we quite understood."

H. de C., suspiciously quiet, but like the sailor's parrot, "a beggar to think," and as he thinks with a wicked pencil, it is just as well to keep on the right side of this young man.

Worthington, the man with the smile that won't come off, and his inseparable companion, W. G. Newton. Some fun always when these two are about together. Fortunate for Worthington that the Conference was a very serious affair. A piece of orange-peel carelessly left on the platform and the resultant activities of an unfortunate member who might have trodden on it would just about have killed him.

Corlette of the intriguing eye-glass. When is it going to drop? Ah, when?

MacAlister, who oils the engine and removes bits of grit from the bearings, giving you the idea that all this hard work and scheming is a real pleasure to him.

And then that individual, pictured by us in South Wales, after reading his criticisms of the R.I.B.A. Annual Report, as a bearded giant with terrible voice, forked-lightning eye, and accusing forefinger. And were we disappointed when "Billy" Woodward materialized in Cardiff? I ask you. We looked down at him and realized that what he lacked in inches he made up for in just those qualities that stamped him as an ideal visitor in any city at any conference.

Others there were, too many to mention, but all jolly good fellows. May we meet them all again, many a time and oft.

Capital and Labour Misunderstandings: How to Avoid Them

By JOHN E. YERBURY

IF a practical scheme is to be initiated for the joint development of Industry by Capital and Labour, which will provide (as it must) for the prevention of unemployment and industrial disputes, it is first necessary to appreciate the reasons which have led to the failure of the present system.

Is it too much to claim that lack of Education has been the chief cause of strife?

Education will be incomplete until the school attendance age is raised to sixteen, and continuation schools are provided in every centre, with compulsory attendance till the age of twenty-one, or the attainment of a definite standard of proficiency.

The working classes of this country have been asked to act like educated thinking men and women, but they have never been taught to think. Taken from school at an age when the children of the well-to-do are expected *to begin to learn*, the children of the poor have been deprived of all opportunity. Taken in the mass, the people of this country are uneducated and unable to work out industrial problems individually; the consequence is, that the average working man takes his ideas from those who pretend to know, and is much more influenced by the pretender who works and lives with him, than by really able men who are the recognized leaders of labour, but are not on the spot. With a few set phrases about Democracy and the Rights of Labour, pseudo-labour leaders (without brains or power of thought) mislead the untaught worker to believe all sorts of fallacious theories, such as restriction of output being the prevention of unemployment.

Men who recognize the true position, and make their demands by constitutional means (knowing full well that other methods must be the death of Democracy), are losing ground every day, because the local branches of trade unions are governed by the revolutionary spirits with nothing to lose, whose only desire is self-betterment.

Unscrupulous men, by methods of intimidation and by false promises, ruin hundreds and thousands of decent honest men who have not the moral courage which education would give them to stand up against their more forceful and aggressive fellows. A mere handful of irresponsible men are able to defy all authority by deceiving the honest workers. *It is inconceivable that such men could succeed with an educated public.* Ignorant men of little repute and less knowledge persuade themselves and others that the whole Labour Party will back them against a Government which they say is too weak to take action; while Government action is generally taken too late. Properly educated public opinion would not tolerate such a state of things for one week; and yet, nearly four years after the Armistice, public opinion is silent in the face of national peril. Lack of education has led to a lack of moral courage, and this works infinite harm to the State.

Education is also necessary to the employer—education which will give him an insight into the lives and thoughts of the worker. The fact that Capital and Labour seldom appreciate the point of view of the other side is responsible for a good deal of friction, and many disputes remain unsettled because the employer never realizes that there can possibly be another side to the question which he honestly feels that he has fairly adjusted.

I have no hesitation in saying that the employing educated classes of Great Britain are as ignorant of the psychology of the working classes of their own country as the Germans were of the psychology of other nations; and it is an unexaggerated statement of the truth to say that this fact alone is likely to jeopardize the future well-being of the nation and seriously affect our industrial position in the world.

A more generous educational system, forming a comparatively highly educated working class, and an effort on the part of the better educated governing class to appreciate the position of the less fortunate masses, would carry us a long way towards the good understanding so much desired.

A factor of enormous consequence is that, from early school-life till the end of the chapter, it is impressed upon an Englishman that to succeed he must make money, and that except to a few idealists, faddists, and madmen, there is no such thing as success which does not also mean riches; the inevitable result has been the following of that parent's advice who, parodying Iago, said: "Make money, my boy; honestly if you can, but make money."

I will undertake to say that if the average Englishman met in real life the prototype of his favourite hero in fiction, he would call the man mad.

Self-sacrifice for the good of the community is applauded on the stage, but in real life is condemned as rank folly. Patriotism, citizenship, altruism, are virtues in literature, but in life fads for rich men, and daylight madness if shown in poor men. The whole tendency is to honour the rich and despise the poor, leaving the virtue of self-sacrifice to find its reward in the next world.

A man's abilities are judged by the amount of money he makes, although, as a rule, one finds it is the cute man rather than the able man who succeeds in business. I do not suppose it has ever entered the thoughts of those who dispense "honours" to search for poor, humble, unknown men who devote all their spare time to the welfare of those poorer than themselves, at great sacrifice to themselves and their families, without reward, and, as a rule, without even thanks from those they benefit.

Some time ago I addressed a workingmen's club, and during the speech I pointed out that the proper spirit which had maintained the club movement was self-sacrifice, and suggested as a motto for the walls of the club-room the saying of Seneca: "To find one thankful man I will oblige many who are not so." During the evening I was approached by a member who informed me he was very much interested in what I had said, but he didn't think much of my —— motto. His idea was: "If you do anything for anybody, do it for yourself"; and this appears to me to be typical of the present-day spirit.

If H.M. the King, as the fountain of honour, would insist upon being satisfied that honours were bestowed for self-sacrifice for the good of the community, instead of being reserved for the rich or the toady, it would go a long way towards a change in our outlook, for a very large number desire honours rather than money, but turn to money-making because they know a poor man stands but little chance. Unfortunately, by the time the money is made by such as these, they care less for honours and desire still more money; and so the worship of the golden calf is ruining the moral fibre of the people. I remember when a return of 5 per cent. satisfied a capitalist, but one never hears of anything less than 12½ per cent. on prime cost in a Government contract, and the contractor keeps the P.C. The standard of living of the masses has become higher, but the standard of luxury demanded by the rich has grown to a point which is absurd and has no limit.

In a country where the golden calf rules, brains are wasted for mere lack of opportunity, while self-assurance succeeds. And in a country where honours are only given to the rich, a life of self-sacrifice goes unrecognized; the children of the usurer may become a burden to the State as idle rich men and women searching after a new form of luxury; while the children of the good citizen toil and spin for a bare existence.

In England, "To him that hath shall be given, and from him that hath not shall be taken away even that which he hath."

My diagnosis, so far then, is that the evils are lack of education and the worship of the golden calf, and that the first remedies to be applied are:—

(1) A perfected educational system with equality of opportunity, under which the best brain or even the poorest may have the chance of development for the good of the Mother Country, while those of average intellect of all classes shall be formed into a proletariat of such a standard that they may at least be able to exercise individual judgment, and not be led like sheep.

(1a) That the education of the governing classes should include such instruction that they may at least understand the point of view of the governed. No public servant should deal with labour questions who has not himself had intimate contact with the labourer.

(2) The incidence of taxation should be so thoroughly overhauled that equality of sacrifice should be as nearly obtained as possible.

(3) Honours should be given only to those who had made real sacrifice to the good of the community. The poor man who devotes his life to the public weal at the expense of his own advancement should be preferred before the rich man who, of his superfluous wealth, endows a charity.

(4) Every public post should be open to any citizen able to attain the necessary qualifications. The Civil Service divisions should be abolished, and promotion given to merit only, and should be open to all. All the professions should be open to the poor, as well as to the rich; the State should find the necessary fees and scholarships to keep any poor man's child during the term of studentship.

(5) The status of the worker should be raised as high as possible, every encouragement being given to men to become highly skilled, while the "Weary Willies and Tired Tims" should be dealt with as criminals.

(6) Class distinctions should be removed as far as possible by levelling up the standard of taste of the whole community, the taxation of useless luxury and the bringing together of all classes in work, recreation, and public service.

(7) Conciliation Boards should be set up in every trade or industry, composed equally of employers, employees, and *representatives of the community*, with an independent chairman.

It is necessary to consider the conditions which prevailed during the war period, and the present conditions which affect the position of Capital and Labour.

It is absurd to expect a contented people so long as governments recognize those who grow rich at the expense of the community, and never make the slightest effort to honour those who devote years of self-sacrifice to benefit their fellows.

It is equally useless to tell the working classes that they have benefited as much as the capitalist, when they know that they have no surplus, and read in the papers every day of the dividends paid, sometimes amounting to 30 per cent. on capital doctored by bonus distributions, paying up uncalled capital out of profits, etc.

I am profoundly convinced that every industry could be so adjusted that all engaged in it might be happy, prosperous, and contented; but it is necessary that Capital should curb its desire for extravagant luxury, and that Labour should see the fallacy of the pernicious theory that restriction of output lessens unemployment.

I would suggest a Trade Parliament (but not so named) for every industry, with representation from Capital, Labour, AND THE CONSUMER in equal proportions, with an independent chairman nominated by the Government. Decision should be arrived at by *secret ballot*, and *two-thirds majority should bind* the whole industry to carry out the decision. The *consumer's representatives* could be appointed *equally by nomination* of associations at request *of Capital and Labour*.

With such a Parliament every industry could arrange for local representation as became necessary, and with goodwill on both sides would be able to guarantee its workers against unemployment and to provide pensions for old age. In every case where it was shown that an industry so organized needed protection or subsidies, I would suggest that it should then be nationalized, *if of vital necessity that it should be maintained*. Under such a scheme we might have fewer multi-millionaires, but we should have a fair and reasonable distribution of profits and a contented people. All employers would be members of the Federation of Employers, and all workmen would be members of the Amalgamated Society (of all trades unions in each separate industry). The Federation and the Society in each industry would conduct the affairs of the industry and settle disputes of a minor character. Lock-outs and strikes would be illegal, and the Industrial Parliament would settle all questions upon which local representatives failed to agree, and would bind the parties for a term of years. It would be the duty of the Industrial Parliament to collect all the information necessary to the conduct of the industry and to keep in touch with its members, to carry on such propaganda work as might be expedient, and to watch the interests of the industry in Parliament. The professional and trade press would be continually informed on all matters connected with the industry, and the daily press would be constantly notified of such details as were of general interest to the community, and of the fixing of rates of interest on capital, rates of wages, and hours of labour.

Employers would be encouraged to take an interest in the daily lives, the education, and the recreation of their employees, and every encouragement would be given to employees to manage their own clubs for educational and recreation purposes, and personal relations would be developed between the managing staffs and the worker.

Promotion should be given for initiative, and any sacrifice on the part of the individual for the benefit of the whole community should be recognized.

The spirit of citizenship, patriotism, *esprit de corps*, and pride of occupation would soon smooth the path and lead the country to higher aims.

As a nation we must think nationally, and bury the golden calf, thinking only of the well-being of the nation as a whole. "The Golden Age, which a blind tradition has placed in the past, is before us," if we see to it that a man shall count for what he is and not for what he has made.

[See Editorial pages for comment.]

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Housing Policy and Progress.

Sir A. Mond, Minister of Health, made an important statement as to the Government's housing policy during a debate on the estimates for the Health Ministry. He said that the estimate of £22,062,000 was £1,732,000 less than last year's figures. A considerable amount of saving had been effected by the reduction in the large and expensive staff and the big housing problem involved. Turning to the general housing position, Sir A. Mond explained that the number of houses authorized to be erected by local authorities and public utility societies on May 26 was 173,000, leaving a margin in hand not yet allocated of 2,400. The number of houses completed on May 1 was 107,661; under construction 47,100; and still to be started 21,237. Private builders: number of certificates, 42,514; number of houses finished, 32,928; outstanding certificates (A) 9,586; total housing provision already made, 140,589; houses authorized, 77,925.

Housing Costs.

Dealing with prices, the right hon. gentleman said that in May 1921 a non-parlour house with three bedrooms cost £697. In November 1921 it cost £577. In May 1922 the cost had come down to £384. In the case of parlour houses with three bedrooms the cost in May 1921 was £830. In November 1921 it was £660, and in May 1922 £400. A year ago the lowest figure approved for a house with three bedrooms was £603; the lowest tender recently obtained was £298. If land and the cost of sewers, fencing, and other charges were included, that figure would be brought up to £380. It would be seen that they were likely to reach, although they had not yet reached, an economic level of houses. There was no reason to suppose that the cost had yet reached its bottom.

Important Colliery Housing Scheme.

He was convinced that the State was not a cheap builder, and that private enterprise could build at lower prices than Government departments. He held the opinion that it was the function of employers of labour to deal with the housing of their employees, and an interesting and important scheme was being worked out, and was to some extent coming into operation, by which the leading colliery owners of the country had combined to form an industrial housing association with a capital of not less than £1,000,000, with the object of supplying 2,000 houses a year for five years in connection with large collieries and undertakings in North and South Wales, Derbyshire, and Northumberland. That association would lease the houses to the collieries at an economic rent. The collieries would then let the houses to their employees at such rents as they thought reasonable, and probably at lower rents than they paid for them. The members of the association were working without a Government subsidy of any kind, but hoped to borrow part of their capital from the Public Works Loans Commissioners. He hoped that this example would be followed and extended.

Slum Clearance.

Dealing with the clearance of slum areas, Sir A. Mond said that the Ministry of Health had approved schemes already, or had schemes in preparation, involving commitments for £60,000. These schemes included three of the worst areas in

London—Brady Street, Ware Street, and Sophia Place, Poplar. In the provinces Sheffield, Manchester, Leeds, Liverpool, and Nottingham were proceeding with schemes, and negotiations with local authorities on other schemes were pending.

The New L.C.C. Hall.

During a debate on the L.C.C. (Money) Bill, Major Gray stated that estimates for the New County Hall at Lambeth had been very carefully drawn. Estimates for every branch of the work were secured before the contracts were let out. Most meticulous care was taken, for example in the allocation of the architects' fees. But the estimates had over and over again been falsified by the war. The actual cost of the first three blocks up to January 31, 1922, was £2,339,534, and the capital estimates then passed by the Council amounted to £2,643,329. This sum, with nearly £600,000 asked for under the Bill, brought the total estimated cost to £3,239,929. Only the foundations of the fourth block, which would ultimately be completed, had so far been laid.

Post Office Building Programme.

Mr. Kellaway, Postmaster - General, stated that, in connection with the telephone service, there was still a very heavy programme of building work to be carried out in the near future. They were making as rapid an extension and as many improvements as were possible within the financial limits of the country. During the current year it was proposed to acquire sites for three new exchanges in the centre of London, about fifteen in the suburbs, and about ninety in the provinces, including Scotland and Wales. It was proposed to begin building works in connection with about twenty-five exchanges in London, and about eighty new or enlarged exchanges in the provinces.

Mr. Bidlake on the Continuity of English Architecture

THE last of this year's series of public lectures was given at the R.I.B.A. last Thursday, when Mr. W. H. Bidlake read a paper illustrated by particularly beautiful lantern slides, on the above subject.

Continuity, said Mr. Bidlake, is not a peculiarity of English architecture, but is a characteristic of all architecture of the past, as it is of the development of the human mind. So entirely, in fact, is continuity the rule in architecture that if discontinuity be detected here or there it calls for explanation.

The cause of this is not far to seek. The wisdom of the father is handed on to the son, the methods of that worker are carried on by his apprentice, and the son by his experience may qualify the father's wisdom; the apprentice in due course may improve on the methods of his master, this making for a living development, but the continuity is unbroken.

Nature in adapting an organism to changing conditions does not destroy and start afresh. She takes an existing organ, modifies it to serve its new purpose—a fish gill to an ear, a fore limb to a paddle or a wing. She does not proceed by the method of the clean slate. Only social reformers seek to do that; the destroyer is the impracticable idealist.

Architecture has its roots in the far distant past, from the time when man passed from the nomadic stage to the agricultural, and settled in communities. There are two primitive human needs, food and protection from enemies, animals, and from conditions of climate.

These conditions at any given spot have been fairly constant for long ages, and the human need arising therefrom has found satisfaction in methods which have become so stabilized as to form deeply-rooted habits and traditions. Thus a building, however crude, is the expression of men's primitive need for protection for himself, or for his god, or for his body in the tomb.

Buildings will be conditioned by the climate and by the building materials available—the stone beam and flat roof of Egypt, the brick vault and dome of Babylonia, the timber framing and high-pitched roof of thatch of Saxon England, and the exquisite refinement in white marble of the Greek temple.

Building styles have thus developed, for the methods of beams and flat roof construction are radically different from those of arch and dome construction. Nevertheless, as a result of proximity, intercourse or conquest, the building customs of one district have influenced those of another.

These districts, however, having already building traditions of their own, absorbed after a time the new ideas and methods, blending the new with the pre-existing without any break or disturbance of continuity. None the less, however complete the fusion, diversity of origin reveals itself on careful examination, and when the fusion is less complete a certain mixed character or even incongruity is readily perceived. It may be that one district may have appropriated the constructional forms of another, and not understanding the constructional meaning of such forms they have employed them as decoration, and as likely as not misapplied them. The logical manner in which such forms are used is evidence as regards their being indigenous or imported. Herein in a peculiar degree lies the fascination of the study of architecture.

A country may perhaps at some earlier time have constructed its buildings in timber, or in timber and mud brick, and so accustomed had it become to the external forms of this construction that, when subsequently its buildings were made of stone, the earlier forms of timber construction were imitated in the stone. Egyptian pylons furnish a good example of this.

In this way the distinctive features of both the Greek Doric and the Greek Ionic order arose, and a certain external continuity in the design was maintained. It is in fact quite a general law of architecture that the constructional forms of one age become the decorative ones of a later period.

The continuity of the conditions of nature developed a responsiveness in the body and in the habits of man. He invested the powers of Nature with his own attributes. They were to be frightened, coaxed, or cajoled to do his pleasure or satisfy his need, and having brought them within his influence by making representations of them, he secured their aid and protection by incorporating their image within his building. Hence the winged bulls of the Assyrian palace were the guardians of the entrance to the palace itself, and the lions at the entrance to the Acropolis of Mycenæ were the guardians of the citadel. Even the Parthenon at Athens presents in the lion heads at the extremeties of the pediments the same idea of warding off the evil powers, and in this respect played the same part as the horse brasses of a country wagoner.

The early Egyptian tomb is covered with painted low reliefs of slaves, in order to secure their labour in the other world, the idea being that representation of a thing called into being a kind of spiritual existence. The soles of sandals were adorned with images of the wearer's enemies, who were thus daily trodden under foot. Most early decoration had, therefore, a magic meaning.

When, however, man lost faith in the efficacy of his magic he continued to sculpture and paint out of habit, and appropriate decoration thus originated.

The crouching animals of Lombardic porches and the churches of Southern France, the gargoyles outside Gothic cathedrals, show how the stock in trade of architectural decoration accumulated from early constructional or magic features. In force of habit and human inertia may be found the solution of the whole problem.

The impenetrable somnolence of the Englishman is proverbial, and the continuity of English architecture can be clearly seen in both ecclesiastical and domestic work.

England in the Middle Ages had gone counter to the rest of Europe and stuck to her own way of doing things. The apse was an invariable feature of ecclesiastical architecture from the basilicas of Rome to the little Romano-British church at Silchester. Later it developed into a series of chapels and an ambulatory, and in the French-Gothic cathedrals the chevet development of the east end was particularly noticeable.

In England two types developed simultaneously: St. Columba from the north brought the square cell type of church with a square projection for the chancel, while St. Augustine introduced the Roman type with apse. The Danes destroyed the Saxon timber churches, and the Normans built a new apsed type, as

seen in Herefordshire and in various cathedrals—Norwich, Ely, Peterborough.

On the wane of the Norman influence the apse fell into disrepute, and the square east end reappeared to supplant the circular apse. The influence of the Celtic missioners is not sufficient explanation of this, but a reason may be found in the fact that the early Saxon churches were built of timber, a material that does not lend itself to circular construction, but rather to horizontal or vertical beams. The timber tradition, therefore, accounts for the square east end, and shows why the circular east end, introduced from the Continent, was a failure.

Canterbury, reconstructed after the great fire of 1175, has a circular end, but with the possible exception of Lincoln it had no followers.

Carlisle and York show the final development of the cathedral into an aisled parallelogram, with large east window.

Ely, with an originally circular apse, when reconstructed; was made square. Gloucester has a Norman crypt, but a square east end was built on the circular foundations of the crypt. Bowed out at the east window it was made to look as square as possible.

Wren, in St. Stephen's, Wallbrook, constructed a domed roof, but for the rest followed the square tradition. St. Paul's shows the apse, but this is due to the fact that Wren had been to France, and was under the influence of the church of the Sorbonne and of St. Peter's at Rome. Nine-tenths of the modern churches are square, with the long nave characteristic of mediæval architecture. Wren for a time followed Michael Angelo against church tradition, but had to give way, and discarded his first designs in favour of the long nave.

Turning to domestic architecture, Mr. Bidlake showed in Bodiam Castle how defensive precautions were retained long after they ceased to be necessary, simply as a matter of habit. Hurstmonceaux, though built of brick, was fortified with elaborate defensive arrangements, which came to be considered the insignia of a gentleman's mansion, and were retained long after they were obsolete.

Battlements became the necessary finish of a wall and are, therefore, used in church towers, and chapels in the same way revert to the mediæval church plan with tower and belfry lights, though bells were never intended.

The mediæval hall with its long open timber roof divided the upper part of the house into two. It had a passage through oak screens, and the bay window terminated the raised dais, of which the table arrangements are still retained on ceremonial occasions.

At Great Chalfield a porch is introduced to balance the oriel projection of the hall; Trinity, Oxford, and the Middle Temple halls show fine roofs and screens.

The early hall had no fireplace, only a central hearth, and the louvre, originally intended for the escape of smoke, became associated with the external appearance of the hall. It was retained through habit, and applied to chapels. It became a glazed lantern in such buildings as the Guildhall.

At Hampton Court and Montacute Italian influence can be seen, but only in the form of a little added decoration.

The Orders were often wrongly applied, being taken from "pattern books," and foreign forms, German and Flemish, can be seen in process of assimilation.

A definite break of tradition was seen in the Inigo Jones period. Newer ideas were, however, all ultimately absorbed into the English tradition.

Mr. H. M. Fletcher, proposing a vote of thanks to the speaker, mentioned that love of horizontality, contrasting with the French cult of verticality, was characteristic of English architecture, as was its fragmentariness. There was an inherent dislike of working out a thing to a logical conclusion, and the result was a collection of beautiful details.

Estate Office House at Walthamstow

The Estate Office House at Walthamstow, Essex, has been erected from the designs of Messrs. William and Edward Hunt, FF.R.I.B.A., architects. The elevations have been given a simple and plain treatment, and are constructed of hand-made multi-coloured stock bricks, varying in tone from grey-red to brown-red, with a band and a plinth of deep red bricks. Plain red hand-made tiles have been used for the roofs. In the interior, which is also plain, there is some nicely detailed woodwork of simple character, and central heating and hot-water installations are provided. The fence shown in the photograph is temporary. The building has been carried out by The Law Land Building Department, Ltd. The heating and hot-water installations were by The Air-Vent Heater Co., Ltd., and the metal fittings were made by Messrs. Yaneddis & Co.

ESTATE OFFICE HOUSE, WALTHAMSTOW WILLIAM AND EDWARD HUNT, FF.R.I.B.A., ARCHITECTS.

Current Architecture. 157—Estate Office House, Walthamstow, Essex: Detail of Entrance Front

William and Edward Hunt, FF.R.I.B.A., Architects

This front is built of hand-made multi-coloured stock bricks, which vary in tone from grey-red to brown-red. A slight contrast is provided by a band and plinth of deep-red bricks. Red hand-made tiles are used for the roof.

The Stability of Walls.—VII

By PROFESSOR HENRY ADAMS, M.Inst.C.E.

THERE are two matters of importance remaining to be dealt with. First, what portion of brickwork above a girder must be allowed for as producing the load, and, secondly, how a concentrated load upon brickwork is distributed over the lower courses?

As regards the first case, it is well known that an opening may be made through a wall as in Fig. 25, where the bonding of the brickwork forms a natural arch. Following this principle we may safely assume that any girder over an opening has only really to support an amount of brickwork equal to that included in the shaded equilateral triangle in Fig. 26. When, however, there are window-openings in the brickwork above the girder as in Fig. 27, it is evident that the angle of 60 deg. must progress upwards as shown. It must also be remembered that any portion of floor or roof coming on to the wall within the shaded area must be allowed for.

In a somewhat similar manner the pressure from a concentrated load on brickwork is assumed to spread outwards from the point of application at an angle of 30 deg. with the vertical on each side, as shown in Fig. 28. It must be remembered, however, that the bearing area of the girder depends upon the strength of the stone and the load to be carried, say twelve tons per square foot on a York stone template; while the area of the stone depends upon the strength of the brickwork, allowing not more than, say, three tons per square foot on stock brickwork in stone lime mortar.

When a pier is put in to carry a heavy load it is sometimes desirable to build it in cement mortar to avoid a settlement of the joints that might break the bond with the adjoining walling, but if the pressure is limited to a maximum of three tons per square foot the spreading of the pressure will remove any risk of settlement. Footings should be carried round piers the same as for walls of equal thickness, the object being to give at least twice the area of the brickwork in the bottom course of footings to reduce the pressure on the earth. The concrete is usually extended 6 in. further all round, and this is sufficient.

The formula $p = \frac{24 - r}{6}$ for safe load on brick piers is independent of the adjoining brickwork, r being determined from the height and the least width of stone template which conveys the load to the brickwork. Occasionally rolled joists are used instead of stone templates to spread the weight brought by the end of a truss or girder over a longer portion of a thin wall to avoid putting in a pier. In such a case the bearing joists must be exceptionally stiff, as the upward pressure or reaction at the ends transforms the joist into two cantilevers. A simple rule for the selection of a section would be to provide one capable of bearing an equal distributed load over a span equal to the length of the bearing joist, or the load may be divided over two bearing joists side by side. Whenever two rolled joists are used side by side they should be connected by separators bolted through the webs at intervals of 3 ft. to 4 ft.

(To be continued.)

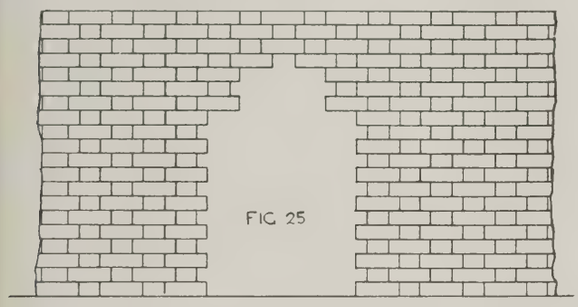


FIG. 25

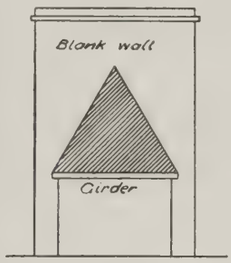


FIG. 26.

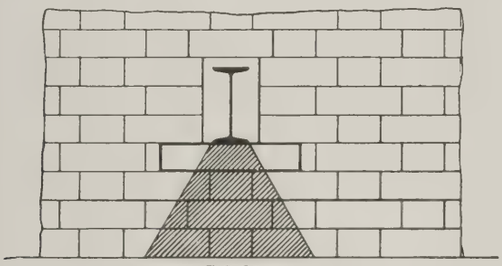


FIG. 28

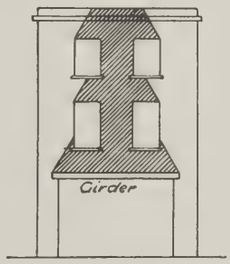


FIG. 27

Correspondence

The International Theatre Exhibition

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—After reading Mr. Holt's enthusiastic article I paid the International Theatre Exhibition a visit, and came away singing pæans of praise that "there is something lacking in us English which most forigners apparently do possess."

As an architect who has studied theatre design in all its ramifications I disagree absolutely that "our theatres as such are a long way behind theirs," i.e., the theatres of Germany and Russia. From the architectural standpoint of the problem the designs exhibited are formless and crude, a mere striving after so-called originality at all costs. "Truth will out," for Mr. Holt, notwithstanding his enthusiastic praise for the Continental architect, cannot refrain from criticizing (and damning criticism, too) the particular designs he mentions.

Apart from a few very fine costume designs and stage settings the only items of real interest in the exhibition are a series of very fine photographs, masterpieces of the photographer's art, illustrating the elimination of the superfluous. These scenes, while possessing no remarkable features or quality of design to attract any attention, are imbued with dramatic interest by the imagination of the artist who has depicted them with the aid of his camera. STANLEY BLOUNT.

The Commercial Ideal

To the Editors of THE ARCHITECTS' JOURNAL.

SIRS,—I should have been content to let this correspondence rest with Mr. Creswell's letter in your issue of June 7 did it not seem that in the endeavour to justify previous assertions he has been betrayed into statements which do less than justice to commercial undertakings in general and furnishing firms in particular.

It would appear probable that the manufactures of some of the firms he stigmatizes contribute to Mr. Creswell's physical comfort and æsthetic enjoyment. There are many (among them myself) to whom such comforts and enjoyment have only been made possible by commercial operations of which advertisement is an essential part.

The hypothetical announcement by the railway company which I instanced *would* exhibit what Mr. Creswell defines as the true condition of an advertisement, in that it would call attention to the facilities which the company provides for the transportation of the reader to the rural scene described. As, however, this particular advertisement does not appeal to the weaknesses of human nature, and is not ugly, Mr. Creswell has no very definite objection to it, and therefore, by implication, does not object to advertisements purely as such.

Many business men—themselves advertisers—will be at one with Mr. Creswell in deploring those types of advertisement which display the characteristics which he anathematizes, but an advertisement which is confined to a truthful statement of the capability and willingness of the advertiser to supply honest goods or service is no more blameworthy than is the exhibition of a professional man's name-plate upon the door of his business premises.

Who can say where advertisement begins? The publication of a book, the artist's flowing tie and eccentricities of dress, the exaggerated traits which men call "individuality" and pride themselves upon—all might, in truth, be called advertisement, and yet be not offensive so long as they are not made the instruments of fraud.

L. E. WALKER.

British Exhibits at the Salon

Following is the list of awards in connection with British exhibits at the Salon, made by the Société des Artistes Français, Jury de la Section d'Architecture :—

Médailles d'Or.

Sir John James Burnet.
Mr. John William Simpson.

Médailles d'Argent.

Mr. Edward Guy Dawber.

Médailles de Bronze.

Sir Edwin Landseer Lutyens.
Mr. Harold Chalton Bradshaw.
Mr. Alexander N. Paterson.

Mentions Honorables.

Mr. Arthur Joseph Davis.
Mr. Detmar Blow.
Mr. Giles Gilbert Scott.
Mr. Henry Philip Cart de Lafontaine.
The late Mr. Ernest Newton.

Law Reports

What is Nuisance to Adjoining Premises?

Lord Terrington v. Desoutter.

June 15. Court of Appeal.
Before the Master of the Rolls and Lord Justices Warrington and Younger.

This was an appeal by the plaintiff, Lord Terrington, from a judgment in the Chancery Division by the late Mr. Justice Paterson, who dismissed the action.

In the Court below, the plaintiff, as assignee from Viscount Portman of the lease of 73 Baker Street, sought an injunction to restrain the sub-lessees, Andre M. Desoutter, J. C. Desoutter, and Desoutter Bros., Ltd., from so carrying on the business of metal artificial limb makers as to cause a nuisance to adjoining occupiers by noise and vibration. By their defence the defendants denied that they had been guilty of any nuisance, and said they had not broken the covenants of their lease.

On the question of fact, Mr. Justice Paterson held that there was a nuisance from noise and vibration due to the proximity of the defendants' machinery to the premises of the persons complaining; but his lordship said the machinery was excellent and well managed. With regard to the covenant in the head lease and the provisions in the under lease which varied the material covenant in the head lease, the learned judge held that there had been no breach of the covenants in the defendants' sub-lease, and said that whatever remedy Viscount Portman might have, Lord Terrington had none. He accordingly dismissed the action, and from this result Lord Terrington now appealed.

Mr. Hughes, K.C., appeared for the appellant, and Mr. Cunliffe, K.C., for the respondents.

Mr. Hughes contended that the business carried on by the respondents had proved a nuisance to the adjoining occupiers, and the matter became so serious last year that the plaintiff felt compelled to take the present proceedings. Having referred to the material covenants and provisions contained in the head lease and under lease, counsel contended there had in the circumstances been a breach of the covenants by the defendants which entitled the plaintiff to the relief he claimed.

The Court, without calling upon Mr. Cunliffe, dismissed the appeal with costs, holding that the decision of Mr. Justice Paterson was right in law and upon the construction of the documents.

Convention of Scottish Architects

The sixth annual convention of the Institute of Scottish Architects has been held at Inverness under the presidency of Mr. A. N. Paterson. After the annual report had been submitted by the secretary, the President said that among the many interests that had occupied their consideration, the Royal Charter, and their educational policy, were those of prior importance. The former, now that it had been granted, could not be considered an end in itself; rather it was a means to an end, or, more properly, to many ends, of which they should not go far wrong in ranking education, for the present at least, as the chief. He attributed the amount of bad architecture which existed in their midst to want of knowledge or insufficient training. Want of knowledge on the part of the public as to what was good, and want of proper training on the part of those entering the profession, in which, as a proper function of such training, he would include the early elimination of the unfit, and the way of progress in both cases was education.

Mr. T. P. Marwick, Edinburgh, was unanimously elected President for the ensuing year.

Mr. Marwick said he would like to see every eligible man in Scotland become a member of the Institute. They ought to be able to exert a powerful interest in securing Registration and needed protection. The access door to architecture ought to be closed to the unqualified as the corresponding doors were closed in medicine and law. They required as much education and ability as the members of these professions.

It was agreed to hold the next annual convention in Edinburgh.

Sheffield University Faculty of Art

References to the good results which have followed the inclusion of the Department of Architecture in the Sheffield University Faculty of Art were made at the opening of the annual exhibition of students' drawings. Notable successes have been obtained by the Department during the past twelve months. In the intermediate R.I.B.A. examination for 1921 the fifth place in order of merit in the United Kingdom was gained by Mr C. C. G. Osborne, and the eleventh place by Mr. H. Fieldsend. In the Society of Architects membership examination the first place for the best standard of the year was awarded to Mr. E. W. Winks, and Mr. C. C. G. Osborne passed with special award of merit (third in the United Kingdom). During the year 108 sheets of testimonies had been accepted by the R.I.B.A. and only four rejected. The average for the whole of the country is about 60 per cent. rejected.

Sir Henry Hadow, Vice-Chancellor of Sheffield University, who presided at the opening ceremony, thought that it was especially suitable that an architectural department should function in a university. Co-operative work with the other artistic and scientific professions could be better obtained by the combined activities of a university than they could anywhere else.

Mr. J. C. Proctor, M.C., A.R.I.B.A., President of the Leeds and Yorkshire Architectural Society, in declaring the exhibition open, said that the advantage of attending a school of architecture was that the student could do all sorts of things that he would never be able to do in private practice. There the practical side killed a student's imagination from the very start, as was the case under the old-fashioned method of pupilage. Mr. Proctor suggested that wherever architects could awaken the interest of the general public in their work they should do so. If their art was not understood they must blame themselves to a large extent, and the remedy lay in their own hands. Every practical architect should carry on propaganda work for his art, and should talk "shop" on every possible occasion. Years ago architecture had its patrons, and this ought to be the case at the present time. He had, he said, seen a good deal of the training of architects since the war, and he had felt more than once that a good many people were going in for architecture as a profession who were not fitted for it. By the encouragement of Government grants men who were in other professions or trades before the war had taken up architecture as a profession, which seemed to him rather an impossible thing to do. Up to a certain point a man had to be born an architect, and he could not become a real success just by accepting a Government grant. He had no desire to discourage students, but he did feel that in their profession there were a good many square pegs in round holes. Mr. Proctor suggested that architects should pay more attention to internal decoration.

A vote of thanks to Mr. Proctor was carried on the motion of Mr. J. R. Wigfull, seconded by Major C. B. Flockton.

Art and Industry

Some Useful Recommendations

"A MORE effective and close co-operation with local schools and museums would be of incalculable value to those industries in which applied art is an important factor." This opinion is expressed by the Industrial Art Committee of the Federation of British Industries after making an inquiry into the relations prevailing between the industries, the local art schools and local museums in the different industrial centres throughout the country. In their report the Committee make it clear that they have considered nothing but the industrial relations of these museums and schools. They fully realize that these institutions cover a much wider field in the educational and social life of the country, but these aspects of their work are plainly outside the scope of the Committee's reference.

In their opinion the most practical designers for commercial purposes are generally those who have served an apprenticeship in the works, thus obtaining a thorough knowledge of the technique and commercial requirements of the industry; but they consider that it is essential that this should be supplemented by a thorough course of training in art under teachers with knowledge of and feeling for the applied arts, and that this training will be much more successful if the student has access to a really fine collection of the best products of his craft, both ancient and modern, especially if the collection is wide enough in scope to show him these products in relation to others of kindred nature or use.

The Committee, in the course of their report, state : We are convinced from the experience already gained as a result of the refresher courses instituted at the Royal College of Art that even when a designer is fully trained he will derive enormous benefit from periodical study under sympathetic teachers, and in the congenial atmosphere of the art school and museum. Nor are designers the only class who would benefit by such study. In our opinion the same applies, though in different degrees, to all who are engaged in an artistic industry whether on the production or the selling side.

In these circumstances it is satisfactory to be able to record that a very high degree of co-operation does in fact exist in some of the most important industrial centres, while many of the art schools and some of the museums are well equipped for rendering service to the local industries. These conditions, however, do not prevail universally. In many centres the local museum is poorly equipped, in some wholly unequipped, with exhibits which throw a light on the local industry. In very few is there any effective means of providing the museum with an up-to-date collection of the products of the local industries. In consequence, neither those industries nor the art school find in the museum material which is of any direct service to them, and co-operation is practically non-existent.

Under these circumstances we have thought it would be of use to indicate what we consider should be an ideal relation between these three important elements, in the hope that the Federation may take some action to arouse the interest of members in the different industrial districts, with a view to an improvement of the present condition of affairs.

In the first place we consider that every museum should have a strong applied art section, and should not confine itself to historical and fine art exhibits as is so often the case. It is particularly important that the applied art section should be thoroughly representative of the lines of production prevailing in the locality, showing what has been done on these lines in the past, both in this country and abroad, and containing an up-to-date collection of the best work turned out by the industry at home and abroad.

We have ascertained that, in some centres, local industries have combined together to keep the museum supplied with samples of their products, and we strongly recommend that this practice should be widely extended, and that local industrialists should, where possible, also give assistance in securing adequate examples of antique and foreign work.

It is also desirable that these products should be shown both separately and, so far as possible, together with other products which are customarily used with them—as, for instance, furnishing fabrics in conjunction with furniture—otherwise the exhibits may tend to be viewed in too purely technical a manner and with insufficient consideration of their function and decorative value. We are aware that this suggestion raises difficulties in regard to expense and accommodation, but we believe that its adoption, even on a small scale, would be of great advantage. Another important point is that proper provision should be made, by means of students' rooms and otherwise, to allow of a detailed study of individual exhibits.

Moreover, we believe that considerable assistance in carrying out such a scheme could be obtained from the Circulation Department of the Victoria and Albert Museum. We believe that very much more use might be made of this department than is done at present, and we know that the authorities of the museum are most anxious that the fullest possible benefit should be derived from the department. It is unnecessary to point out how greatly the department can help a museum which is not able independently to secure a complete collection.

We also suggest that local museums which contain adequate applied art collections might be made more useful to manufacturers, designers, and students by the establishment of a system of museum lectures and personally conducted visits, such as has been arranged during recent years in various museums in London. We realize, however, that it may not everywhere be easy to obtain suitable lecturers or guides, and without them a scheme of the kind had better not be attempted.

We would also emphasize the great importance of establishing a much closer and more personal interest than generally exists at present between the local manufacturers and the art schools. In many centres there appears to be a feeling of estrangement, almost of suspicion, which is fatal to sympathetic co-operation. Employers fear that if they allow their employees to attend the school they may drift away from the industry into other branches of art work. A closer connection between school and industry should help to remove this difficulty by increasing the industrial value of the training afforded and the employers' recognition of its value. Again, employers are often reluctant to allow employees to attend classes during work hours, with the result that the student is tired and unable to benefit to the full by the opportunity afforded him at evening classes. In our opinion it will generally be found an excellent investment to allow a promising student a whole day or more a week at an efficient art school.

The manufacturer's attitude is, we believe, sometimes due to the fact that many schools suffer from the lack of a technical demonstrator, expert in the local industry, so that the teaching tends to become unduly academic. Where this want is due to lack of funds, the local industries might well be willing to make arrangements for experts actually engaged in industrial work to attend the school for this purpose, and even a system of informal "visitors" from local firms could be of great assistance. This should not be difficult, so far as evening classes are concerned.

We also think that the school and local industry would benefit greatly if both the teachers and students were given opportunities to visit works in the neighbourhood, where they could obtain a closer realization, not only of the processes employed, but of the commercial and industrial atmosphere in which a designer has to work.

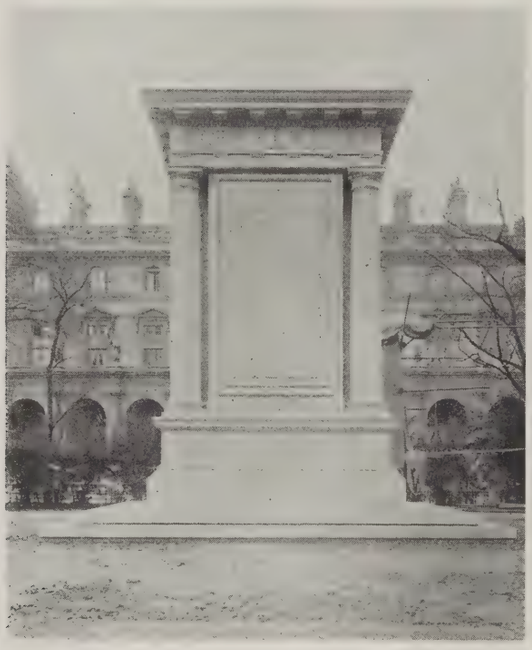
We would also suggest that, where the art school is adequately equipped and staffed, a system of refresher courses, similar to that which has lately been arranged with the Royal College of Art, would be of great advantage. The benefit of such courses would be greatly increased where there was also a well-equipped local museum, and where the course could take place both in the school and the museum.

Finally, we feel that in order to secure the fullest co-operation, local industries should be strongly represented on the Boards both of the school and of the museum, and that, if possible, this representation should be upon the nomination of local trade associations, in order that an official connection may be established. In this connection we would venture to suggest to trade associations which represent an artistic industry, the desirability of appointing a special art or art and technical committee, which could take up energetically these and similar questions. Many associations have already done this with excellent results, and your committee believe that the effectiveness of their own work would be greatly increased by the existence of such sub-committees.

A Pictorial Review

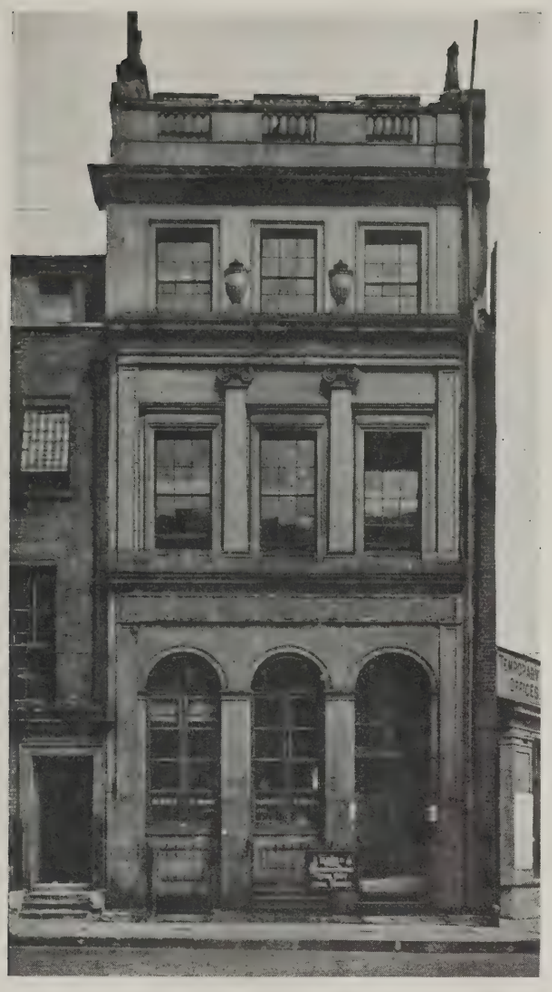
Illustrations of Topical, Practical, or Curious Interest

Readers are invited to send in sketches and photographs for publication in these pages. A fee of 2s. 6d. will be paid for each illustration accepted. Contributions should be accompanied by short explanatory notes.

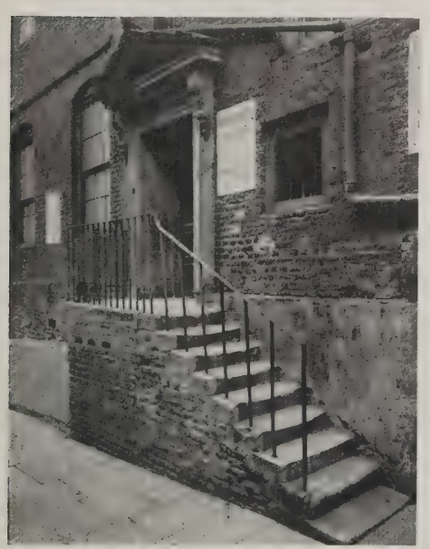


These views show the side and end elevations of the pedestal of the Lafayette monument which stands in the courtyard of the Louvre. It was designed some years ago by Mr. Thomas Hastings, who was made a Chevalier of the Légion d'Honneur by the French Government.

The housebreakers are busily at work demolishing the stucco architecture of John Nash in Lower Regent Street, and very shortly the house which the architect designed for himself (shown above) will also have disappeared—more's the pity. It makes a delightful incident in the succession of stucco facades, with its spacious forecourt and finely proportioned wings.—H. J.



Until quite recently this little building stood on the south side of Trafalgar Square, close to the roadway leading to the Mall through the Admiralty Arch. Many of the architects who must have admired it may not perhaps know that it was a work of the great C. R. Cockerell. The view on the left shows the rear elevation : that on the right the front to Trafalgar Square. The former, I think, is the more satisfactory as an architectural composition.—G. S. T.



Herewith I send you photographs of two rather interesting examples of seventeenth-century external stairways – the first from a City house (now demolished) and the second from Newcastle House, Lincoln's Inn Fields. The steps to the former must at some time have been made higher than they originally were, for the doorway is rather out of proportion. What a fine approach a symmetrical stairway makes to a house! For simplicity of character and dignity of effect this one of Newcastle House must be difficult to match. It was designed in 1686 by Captain Wynne, a pupil of Sir Balthazar Gerbier.—P. J.

Industrial Welfare in the Provinces

A Successful Experiment at Wolverhampton

THE remarkable advance which the application of the principle of industrial welfare work has undergone in recent years must be an undoubted source of gratification, not only to the pioneers of the movement, but to those employers who have been enlightened and wise enough to give it a trial. That benefits of every kind would follow from genuinely conceived efforts in this direction is no more than was expected from its originators, whose courage and faith have thus been amply justified. It may be further stated—so subtle are the psychological laws which are called into operation—that the greatest measure of success invariably results when the promoters of an industrial welfare scheme are entirely innocent of ulterior motives. This perhaps is the best possible answer to certain critics who have cynically suggested that disinterestedness is seldom evident in undertakings of this kind.

THE ARCHITECTS' JOURNAL so fully realizes the advantages which industrial welfare work possesses as a means of engendering mutual confidence and a spirit of comradeship between employer and employee, that the editors have for some time past availed themselves of every opportunity of calling attention to the movement and advocating its extension. In furtherance of this policy, it is a pleasure to give some account of the development and progress of an experiment in the promotion of an industrial welfare scheme which has been established at the works of Messrs. Mander Brothers, the well-known manufacturers of varnish, colour, and printing ink, of Wolverhampton. The firm was founded as far back as 1791 by Benjamin Mander, who was the great-great-grandfather of the four present junior partners, and the great-grandfather of Sir Charles Mander, Bart., the head of the firm.

The business has been carried on on the same spot, though on a greatly extended scale, as it was 130 odd years ago, and during the whole of that time the partners have always been Manders and direct descendants of the founder. Such continuity of succession naturally tended to form a personal relationship of a very rare character between employer and employee, and this community of interests became an honoured tradition of the house. As the business grew, however, there arose an increasing difficulty in maintaining this intimacy of association, and with a view to re-establishing it a welfare movement was started in 1920. This movement has made remarkable and rapid progress, and its development is an example of the boundless goodwill which is ready to manifest itself among those who are connected together in business, if adequate measures are taken to call it forth.

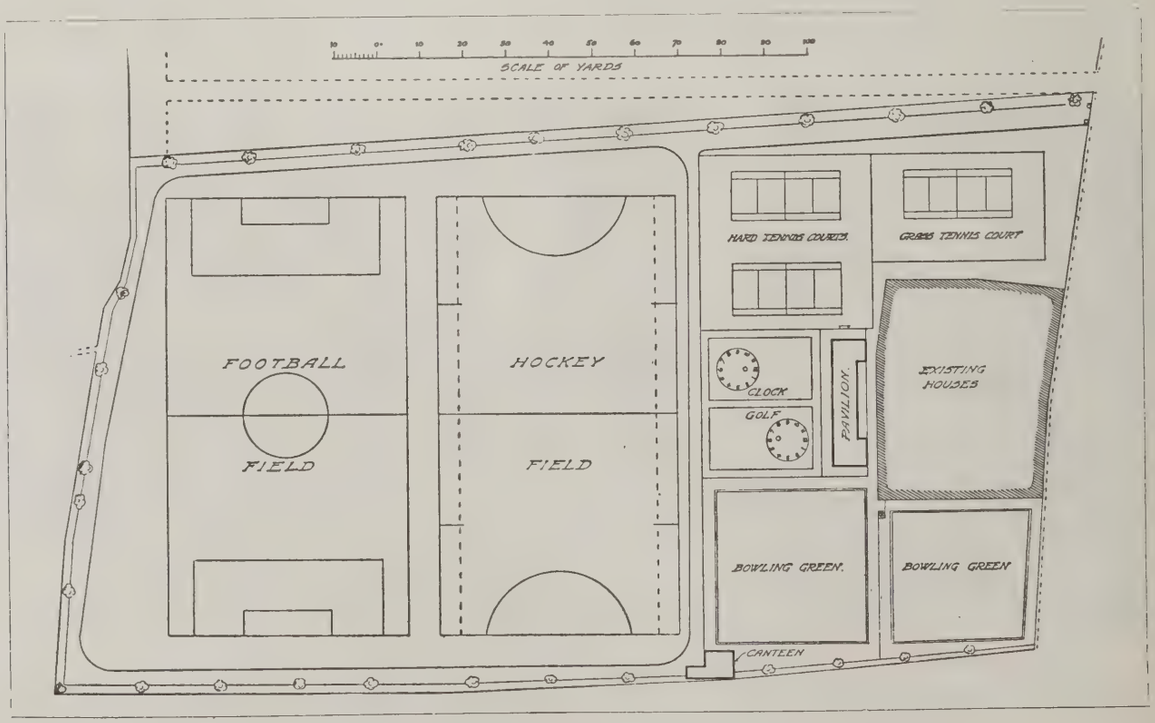
Much valuable assistance was rendered by the Industrial Welfare Society, of 51 Palace Street, S.W., which has accumulated a great deal of experience in these matters, and is in a position to give expert advice to those taking up this important side of industrial activity. H.R.H. the Duke of York, K.G., is president of the society, and while its Council is composed of a number of the leading employers and labour leaders of the day, the work is carried out under the general direction of Mr. Robert R. Hyde.

The first step to be taken was the formation of a Works Joint Committee, and this consists—on the management side—of the five partners, a representative elected by the office staff, and another by the foremen. On the workers' side there are twelve representatives from the various departments, eleven from the Workers' Union, and one who is nominated from a number of miscellaneous unions having a small total membership in the works. This democratically constituted body meets in the firm's time every two months, or oftener if found necessary. It is based on trade union organization, to which the firm gives every recognition and encouragement.

The chairman is a member of the firm, and the vice-chairman a workman, while there are joint secretaries, one from each side. It should be further understood that either side enjoys the right of introducing—in an advisory capacity—an official from its own trade organization.

Having described the composition of this committee, it only remains to say that it discusses in a perfectly frank and conciliatory manner any question which is at all relevant to the business or industrial conditions, though it should be pointed out that wages and hours are settled for the whole of the paint, colour, and varnish industry by a National Joint Industrial Council.

Experience has already shown that a mutual feeling of respect and goodwill always pervades the meetings of the committee, and in this congenial atmosphere many difficult problems have been solved and much good work has been amicably performed by joint effort. Grievances have been ventilated and investigated, working conditions improved, and differences adjusted, by simply



PLAN OF A BUSINESS FIRM'S SPORTS GROUND IN THE PROVINCES.

EXTERIOR AND INTERIOR OF PAVILION AT A BUSINESS FIRM'S SPORTS-GROUND IN THE PROVINCES.

allowing a spirit of accommodation to have full sway. Among a large number of subjects which have been dealt with by the committee at its meetings may be mentioned: dental treatment, the works trip, short time arrangements, works rules, overalls, cloak-room accommodation, the two-shift system, and trade prospects. It is hoped by means of this committee to bring the employees into increasingly closer touch with the wider interests and prospects of the business as a whole, and to obtain the co-operation of all in carrying on to the best purpose the industry which is the joint concern of both employer and employee.

Of hardly less importance than the work done by the committee, to whose functions the foregoing brief reference has been made, is the task allotted to the Welfare Executive Committee. This consists of the partners, and thirteen representatives from the various departments, with five co-opted members, and deals with the many different aspects of entertainment, recreation, and education. Some idea of the widespread interest taken in this side of the scheme may be gathered from the fact that the work of the executive committee is distributed among no fewer than nineteen sub-committees. These deal respectively with finance, the journal, bowling, entertainments, cycling, bagatelle, the holiday fund, fishing, gardening, chess, cricket, tennis, football, the canteen, hockey, the coal club, the library, debates, and swimming. There is a recreation ground of over five acres in extent within a mile and a half of Wolverhampton, comprising football, hockey, and cricket grounds, two bowling greens, three tennis courts (two hard and one grass), and a pavilion where whist drives, dances, and concerts are held. In addition to these, there is a canteen in a separate building.

With regard to the capital charges in connection with the playing fields, bowling greens, tennis courts, and buildings, these are borne by the firm, while the maintenance and running expenses are met by the employees. The funds for the latter purposes are derived from voluntary weekly contributions of twopence from all employees over eighteen, and from the profits which the various entertainments yield.

The management rests entirely in the hands of the freely elected representatives of the employees, though the members of the firm give what assistance they can, and one of them acts as chairman of the executive. Owing to the willing and enthusiastic co-operation of a large number of people in all spheres and departments of the works, the scheme has proved an immense success.

FREDERICK CHATTERTON, F.R.I.B.A.

R.I.B.A.
Final Examinations

ALTERNATIVE PROBLEMS IN DESIGN.

Following is a list of the R.I.B.A. Final Problems in Design for the six months ending December 31, 1922:—

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

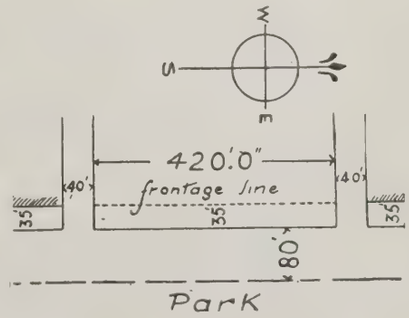
4. Drawings for subjects (*a*) are to have the shadows projected at an angle of 45 deg. in line, monochrome, or colour. Drawings in subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

Subject LXIV.

(*a*) A Church, adjacent to or in a town, upon a corner site, 150 ft. by 100 ft., the junction of the roads being at the south-east corner, for a congregation of 600. The cost is to be upon a reasonably economical scale.

Drawings: $\frac{1}{8}$ in. scale. Ground plan. South, east, and west elevations. Longitudinal and cross sections.

(*b*) A speculative builder has purchased a plot of land, and proposes to build thereon a Row of Fifteen Houses—looking east to front a park. The terrace to be built of brick, but stone embellishments may be employed, if desired.



Drawings: Block plan, $\frac{1}{32}$ in. scale. East elevation, $\frac{1}{16}$ in. scale; and plans, sections, and elevation of one house to $\frac{1}{8}$ in. scale.

Subject LXV.

(*a*) The formal treatment of the Garden of a Public Square in a town, having a statue, memorial shelter, or a fountain, or such features in combination, in the centre.

Plan the garden and design the enclosure and other features.

The area of the enclosure is to be 15,000 ft. The shape is optional.

Drawings: Plan, $\frac{1}{32}$ in. scale. Architectural features, $\frac{1}{8}$ in. scale. Details of stone and ironwork, $\frac{1}{2}$ in. scale.

(*b*) Water is raised from a deep well—to a tank overhead—the underside to be 30 ft. above ground level—the tank to hold 3,000 gallons. Access to tank to be gained by a staircase, and there is to be an indicator to show the level of the water in it. The water is to be raised by an engine (internal combustion), which is also used to generate the electricity for lighting the house, near by. Required a Building, Over the Well, to Carry the Tank, house the engine and pump apparatus—provide a switchboard, accommodation for thirty accumulator cells, and space for a small carpenter's bench. Materials, brick walls, tiled roofs.

Drawings: Elevations and section to $\frac{1}{8}$ in. scale.

Subject LXVI.

(*a*) A design for the Façade of a Tram Depot on a highway, the depot to admit six trams.

Drawings: $\frac{1}{8}$ in. elevations; $\frac{1}{2}$ in. detail.

(*b*) Submit a design on an open site of one acre for a £5,000 Country House. The sections to show constructional detail.

Drawings: $\frac{1}{8}$ in. scale plans, elevation, and sections; $\frac{1}{2}$ in. scale portion of exterior; $\frac{1}{32}$ in. block plan.

Dates for Submission of Designs in 1922–23

	Subj. LVIII.	Subj. LIX.	Subj. LX.
United Kingdom	31st Aug.	31st Oct.	30th Dec.
Johannesburg	31st Oct.	30th Dec.	28th Feb.
Melbourne	30th Nov.	31st Jan.	31st Mar.
Sydney	30th Nov.	31st Jan.	31st Mar.
Toronto	30th Sept.	30th Nov.	31st Jan.

List of Competitions Open

Date of Delivery.	Competition.
June 30	Erection of a New Secondary School at Westcliff. Premiums £150, £100, and £50. Assessor, Mr. George H. Widdows, F.R.I.B.A. A deposit of £2 2s will be required by the Committee for the Plan and Conditions of Competition. Apply Mr. H. Farrands, M.A., Director of Education, Education Offices, Southend-on-Sea.
June 30	Museum and Institute as war memorial for City of Auckland, New Zealand. Cost £170,000. Premiums amount to £1,000. Apply Secretary, R.I.B.A.
	Through the courtesy of a New Zealand architect, now in London, three photographs showing different aspects of the site of the Auckland War Memorial have been lent to the R.I.B.A. They are exhibited in the R.I.B.A. Library for the benefit of competitors.
July 15	Poster to be used at the R.I.B.A. for advertising the exhibitions of drawings which are held from time to time in the Galleries. Premium £5 5s. Assessors—Mr. Halsey Ricardo, F.R.I.B.A., Professor S. D. Adshead, M.A., F.R.I.B.A., and Mr. Alfred Cox, F.R.I.B.A. Apply Secretary, R.I.B.A., 9 Conduit St., W.1.
No Date	Lay-out of Land at West Cliff, fronting the sea, in Promenades, Recreation Ground, Roads, and Building Plots. Premiums £300, £200, and £100. Apply Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate.
No Date	Designs and Estimates for a Public Hall and Baths, etc., to be erected at Lytham. Premiums of 100, 50, and 25 guineas will be awarded under the advice of Mr. A. W. S. Cross, M.A., Vice-President of the R.I.B.A., as professional Assessor. Apply Mr. Chas. A. Myers, Clerk to the Council, Council Offices, Lytham. Deposit £1 1s.

Competition News

Ramsgate Lay-out.

The President of the R.I.B.A. has nominated Professor S. D. Adshead, F.R.I.B.A., as assessor in the above competition.

Dewsbury War Memorial.

Dewsbury War Memorial Committee have adopted a scheme for the erection of a single monument in front of the Town Hall, at a cost of £5,000. Premiums are to be awarded for the three best designs, the assessor being Professor C. H. Reilly, of the School of Architecture, Liverpool University.

News Items

The late Mr. G. B. Turpin.

We regret to announce the death of Mr. George B. Turpin, of Plymouth, builder and contractor, at the age of sixty-four.

Whitby Parish Church.

The ancient parish church of St. Mary, Whitby, which was built over 800 years ago, is in urgent need of repair. The work is to be carried out under the supervision of Mr. James Souden, who is in charge of the restoration work at Whitby Abbey.

The Royal Commission on the Government of Greater London.

On Wednesday, June 21, a deputation representing the R.I.B.A. gave evidence before the above Royal Commission in the Middlesex Guildhall. The deputation, which was headed by Sir Aston Webb, P.R.A., Past President, consisted of Professor S. D. Adshead, Major Harry Barnes, M.P., and Mr. W. E. Riley.

Sheffield Building Trades Memorial.

As a memorial of those who fought in the war, the employers and operatives in the various branches of the building trade at Sheffield are equipping a section of the technical reference library with a complete set of reference books for the use of students in all branches of the trade, and a memorial tablet is to be erected in the library.

The Rome Scholarship in Architecture Awards.

The Awards in the Rome Scholarship in Architecture are announced as we go to press. The winner is Mr. Stephen Welsh, A.R.I.B.A., and Mr. George Checkley, A.R.I.B.A., receives the Henry Jarvis Studentship. Both are students at the Liverpool University School of Architecture. Further particulars will be given next week.

Choppington Colliery War Memorial.

Considerable progress is being made with the Choppington Colliery War Memorial which takes the form of an institute and hall and is being erected jointly by the owners of the colliery and their workmen. The site has been given by the Coal Company, who have also supplied material to the value of £500. The work is being carried out from the plans of Mr. G. Dunn, of Bebside, and the cost is stated to be approximately £4,000.

New Zoo Aquarium.

A scheme is being prepared by the Zoological Society for the construction, at a cost of £40,000 to £50,000, of a new aquarium at the Zoo. The aquarium, to contain marine and fresh-water creatures, will be under the Mappin terraces. The part open to the public will be a crescent-shaped gallery 400 ft. long lined by tanks. There will be Tropical Halls and a research laboratory. The place will be lit by electricity. Messrs. Belcher and Joass are the architects.

Professor of Architectural Design, Glasgow.

Mr. T. Harold Hughes, A.R.C.A.E., A.R.I.B.A., has been appointed Professor of Architectural Design in the School of Art, Royal Technical College, Glasgow. Mr. Hughes is thirty-five years of age, and in 1920 took up partnership with Sir John Burnet. In his early career he won many prizes, and was a medallist of the Royal Institute of British Architects. He is a Fellow of the Surveyors' Institution. He was assistant in the Royal College of Art to Sir Ernest George, R.A., and in 1910 was appointed head of the architectural department, Robert Gordon's Technical College, Aberdeen. During the war Mr. Hughes was a captain in the Royal Engineers.

Movable Tudor House.

A Tudor house erected in an old English shire, in 1485, is for sale. The house, which is "available for erection anywhere," has a banqueting hall and many bedrooms, also drawing and dining rooms, library and boudoir. Much of it dates from 1500. Messrs. Ralph Pay and Taylor, of Mount Street, W., state that bricks, tiles, window frames, and red slate tiles are built on a framework or skeleton formed by a ring beam. The materials could be detached without much difficulty and with the central beam and framework placed on board a ship for transit.

Subsidy Houses in Scotland.

The Scottish Board of Health have issued a notice to local authorities reminding them that houses being built by private persons under the subsidy scheme had to be completed by June 23 in order to rank for the Government grant (£230 to £260 per house). The Board have asked local authorities to ascertain the stage which the construction of the houses has reached, so that they may issue the necessary approval certificate only for those houses which were completed by June 23. Under the private subsidy scheme, sanction has been given to the erection of 3,193 houses in Scotland, of which 1,670 houses have been completed and grant paid thereon to the amount of £403,633 6s. 8d.

Royal Gold Medal Dinner.

The following guests dined with the Council Dinner Club of the R.I.B.A. on Monday last, before the presentation of the Royal Gold Medal to Mr. Thomas Hastings of New York: Mr. Thomas Hastings (Royal Gold Medallist) and Mrs. Hastings; Mr. Post Wheeler (representing the American Ambassador) and Mrs. Post Wheeler; Mr. Robert Skinner (Consul-General for the United States) and Mrs. Robert Skinner; The Right Hon. Viscountess Astor, M.P.; the Right Hon. the Earl of Midleton, P.C., K.P.; Sir Harry Brittain, K.B.E., M.P., and Lady Brittain; Sir Aston Webb, P.R.A., and Lady Webb; Sir Reginald Blomfield, R.A., and Lady Blomfield; Sir Edwin Lutyens, R.A.; Sir Ernest George, R.A.; Mr. C. Lewis Hind; Professor C. H. Reilly, O.B.E.; Commendatore R. Lanciani.

New Inventions

Latest Patent Applications.

16098.—Ayliffe, A. E.—Provision of glazed surfaces on Portland cement. June 9.

15655.—Captick, R.—Chimney pots, roof ventilators. June 6.

15768.—Hadsell, A. D.—Surveying instruments. June 6.

15870.—Horsley Bridge and Engineering Co., Ltd.—Steel or iron trough flooring, etc. June 7.

15748.—International Onepipe Heater, Ltd.—Heating buildings. June 6.

15649.—Lythe, A. — Scaffolding supports, etc. June 6.

Specifications Published.

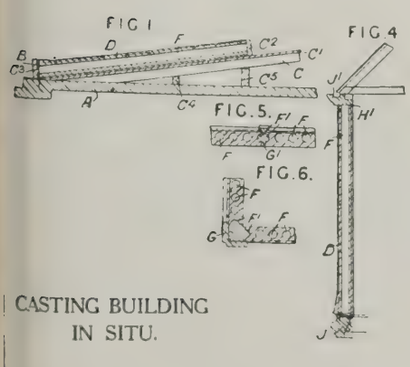
157883.—Dujarric, L. Faure.—Reinforced concrete structures.

160388.—Rogers, F. H.—Forms for building blocks.

180430.—Needham, E. F.—Wall construction.

Abstract Published.

178514. — Casting Building in situ. — B. E. Bowen, of 282 Capworth Street, Leyton.—In casting concrete walls of buildings in situ, the slabs D, of story height, are cast in a position slightly inclined to the horizontal, as shown in Fig. 1, being hingedly secured to the foundation A, or the parapet beams J, Fig. 4, for the higher stories, by mild steel wires B embedded in the concrete. When the slab has finally set, a bed of mortar is run along the lower edge, and the slab is then hoisted into the vertical position by tackle. The mould consists of bottom boards C, C^1, head and foot boards C^2, C^3, and side boards (not shown), the bottom boards being supported on ad-adjustable bearers C^4, C^5. A layer of clinker or breeze concrete is first placed in the mould, with tapered cores for forming cavities F and reinforcing bars as desired; the mould is then filled up with fine ballast concrete, which is tamped and finished on the face after the manner of a floor. When the initial set has occurred, the cores are slightly withdrawn to prevent adhesion, and are removed after the final setting. Half cores are employed at the sides to form the cavities F^1, Figs. 5 and 6, to receive the jointing-columns G^1, G. For solid slabs the cores for forming the cavities F are omitted. The wall-beams, wall-plates H^1, Fig. 4, etc., are cast in situ, and the parapet beam may be formed with a rainwater gutter J^1.



CASTING BUILDING IN SITU.

The above particulars are specially prepared by Messrs. Rayner & Co., Registered Patent Agents, of 5 Chancery Lane, London, W.C. 2, from whom readers of the Journal may obtain all information free relating to patents, trade-marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and forward on post free for the official price of 1/- each.

Architects' Assistants' Meeting at Kettering

A general meeting of the Leicester and Northants Branch of the Architects' and Surveyors' Assistants' Professional Union has been held at Kettering. The chair was occupied by Mr. H. R. Surridge, hon. branch secretary, who introduced Mr. John Mitchell, the general secretary from London, who is visiting the Northern branches of the Union.

Mr. Mitchell referred to the appalling conditions of the professions of architecture, surveying, and civil engineering so far as the assistants were concerned. About 500 assistants throughout the country were unemployed. The numbers who were entering the professions yearly ran into thousands and underpayment was prevalent. To combat this overcrowding he advocated the urgent need of every professional assistant throughout the country enrolling as a member, the regulation of entry to the professions, and the need for the formation of a Whitley Council of employers and employed to consider all questions affecting the general conditions of service and the protection of the professional interests as a whole. Negotiations were in progress with various co-operative societies respecting the employment as clerks of professional men, and the consequent underpayment and lowered status of the latter class. The question of compensating members recently employed by the British Civil Service in Ireland who were discharged on the advent of the Irish Free State was raised, through the agency of the Union, in the House of Commons, where it received sympathetic consideration from the Government. Mr. Mitchell quoted several recent instances where the Union was instrumental in obtaining large increases of salary for underpaid members.

A general discussion of the Union's policy took place at the close of Mr. Mitchell's address.

The following office bearers were elected for the ensuing year: Chairman, Mr. C. R. Crompton; hon. secretary, Mr. H. R. Surridge; branch committee, Messrs. R. P. Cook, L. Parkin, and F. E. Simpkins, and the branch social and educational programme for this year was outlined.

At the close a vote of thanks was accorded Mr. Mitchell. In reply, Mr. Mitchell expressed his confidence in the officials and the future of the Leicester and Northampton Branch of the Union.

Coming Events

Wednesday, June 28.

National Union of Manufacturers (Incorporated). — Conference of manufacturers at Caxton Hall, Westminster. 2.30 p.m.

Saturday, July 1.

Northern Architectural Association.—Sketching meeting at Lumley Castle and Chester-le-Street Church.

Monday, July 3.

R.I.B.A.—"Recent Excavations at Rome." By Dr. Thomas Ashby.

Friday, July 7.

The Art Worker's Guild.—"American Sculptors."

Saturday, July 8.

Edinburgh Architectural Association.—Annual Excursion to Stirling Parish Church, Stirling Castle.

Wednesday, July 12.

Northern Architectural Association.—Evening meeting. Heworth Quarries.

Trade and Craft

Furniture for South Africa.

H.M. Trade Commissioner at Cape Town desires to receive catalogues of United Kingdom manufacturers of furniture, in order that they may be available for inspection at his office by interested enquirers. Catalogues should be forwarded direct to H.M. Trade Commissioner, P.O. Box 1346, Norwich Union Buildings, St. George's Street, Cape Town.

Fire at Messrs. Sankeys.

Considerable damage has been done by fire to a large shed and an amount of stock at the Ilford branch of Messrs. J. H. Sankey and Son, Ltd., manufacturers, merchants, shippers, and exporters of cement, lime, bricks, slates, tiles, sanitary and fire-clay goods, etc. Fortunately no damage was done to the offices or to the most important buildings, plant and stock, and the business of the company will in no way be affected.

Rubber Carpeting.

Some tastefully coloured samples of Paraflor rubber carpeting—a floor covering which combines the softness and solidity of carpet with the cleanliness of the polished floor—have been sent us by the North British Rubber Co., Ltd., of 204 Tottenham Court Road, London, W.1. Made in a variety of artistic colours, including green, blue, black, French grey, tan, and maroon, this carpeting should be eminently suitable for use in the home and in public, office, and other buildings. The carpeting is reversible, wears the same colour throughout, and can be cut to any shape with a sharp knife. When laid the floor is cleaned in the usual manner by washing with soap and water, and, if desired, it may be polished with an ordinary floor polish. The carpeting is manufactured in rolls up to 100 ft., in widths of 36 in. and 48 in., and in thicknesses of $\frac{1}{8}$ in. and $\frac{3}{16}$ in. Among the many buildings in which Paraflor has been laid are the following: Guy's Hospital; St. Bartholomew's Hospital;

Devonshire Hospital, Buxton; Booth Hall Infirmary, Manchester; Holborn Empire, London, W.C.; Empire Theatre, Glasgow; The Palais de Danse, Edinburgh; Reform Club, Manchester; Dr. Barnardo's Homes, London; Drury Lane Theatre, London; University of London Buildings; Chamber of Commerce, Edinburgh; Messrs. Gamage, Holborn, London, E.C.; Messrs. Stewarts and Lloyds, Birmingham; Bleachers' Association, Ltd., Manchester; Ford Motor Co., Ltd., Manchester; Ellerman City Line, London; Barclay's Bank, Evesham and Redcar; All Saints' Church, Fulham; Westminster Public Library, London; The Royal London Opthalmic Hospital.

Simplex Switch-Plugs.

A new illustrated leaflet (No. 940) has just been issued by Messrs. Simplex Conduits, Ltd., to describe the several ingenious features which have been embodied in the firm's new pattern switch-plugs, switches, and cut-outs. Simplex multiple switch-boxes provide an economical and convenient method of grouping together a number of switches or wall-sockets. Switches are mounted on pillars screwed into the bottom of the box—an arrangement which allows ample room for the circuit wires and greatly facilitates wiring. This method of mounting has the added advantage of permitting a fixed type box to be almost instantaneously converted into an adjustable box suitable for switches or wall-sockets. The firm's interlocking switch-plug has been specially introduced to meet the pronounced demand for a thoroughly satisfactory water-tight interlocked switch and plug for use in factories, etc. It is designed on entirely new lines, in that the insertion or withdrawal of the plug actuates the quick make and quick break switch mechanism. This principle is claimed to ensure the maximum of safety, since when the current is not required, the plug must necessarily be withdrawn. Simplex watertight switches consist of a quick make and break switch operated by the semi-rotary movement of the milled brass handle which passes through a watertight gland in the cover of the box. Definite "stops" are provided on the under side of the cover to prevent excessive pressure upon the switch dolly, and an imperishable packing is introduced between the box and the cover to ensure a watertight joint. These watertight switches are claimed to retain all the desirable features of the quick make and break action switch. Both the weatherproof and the watertight patterns of the firm's Iron-clad cut-outs consist of Diaduct fuse units (Pat. No. 159524) mounted in heavy cases with hinged covers, and in the D.P. type are fitted with a dividing fillet. Copies of the leaflet may be obtained on application to the company at Garrison Lane, Birmingham.

The All-England Lawn Tennis Ground.

The painting of the roof of the All-England Lawn Tennis Ground at Wimbledon is now complete, and the colour selected should prevent any chance of the glance from it affecting the light in the centre court. The paint used was "Kelasto," manufactured by Messrs. Kelasto and Recelt Co., Ltd., 39 Victoria Street, S.W.1. This firm are manufacturers of scientific preparations for the preservation of metal work, concrete, etc., and for rendering porous materials impervious to water, acids, oils, and spirits, and of finest quality oil paints, varnishes, and enamels. Among the well-known specialities of the company are an ante-corrosive composition, a waterproofing solution, glaze, enamels, varnishes, and first coat and finishing paints, all under the name of Kelasto, and an oil-proofing composition known as Recelt. The colours in which Kelasto glaze, paints, and enamel are made number forty-two.

New Picture House for Norwich.

A new cinema from the designs of Mr. J. Owen Bond, Licentiate R.I.B.A., has been erected at Norwich to take the place of a smaller picture house and old factory buildings in the Haymarket. The whole of the electric light fixtures were supplied and manufactured by the General Electric Co., Ltd., each fitting being specially designed in the company's studios. The modern Greek classical treatment and Grecian bronze finish of the fittings are the very embodiment of delicacy and refinement. Close co-operation between architect and manufacturer in this connection has resulted in the decoration and lighting forming one coherent scheme, adding greatly to the charm of the whole.

The Rio Centenary Exhibition

The interior decorations for the British Government's Pavilion to be erected at the Rio Centenary Exhibition this year are ready to be shipped. The most interesting parts of the decoration are the panels and stained glass. The panels represent "The Seven Seas," and are the work of Mr. Charles Sims, R.A., Professor Gerald Moira, and Professor Anning Bell. These, combined with the heraldic frieze (also designed by Professor Anning Bell) and the stained glass dome, make an effective scheme of decoration. For the dome itself 6,500 pieces of glass, held together by more than 7,000 ft. of leaded strips, have been used. The dome occupies 270 sq. ft. of ceiling space, and the glass weighs three-quarters of a ton.

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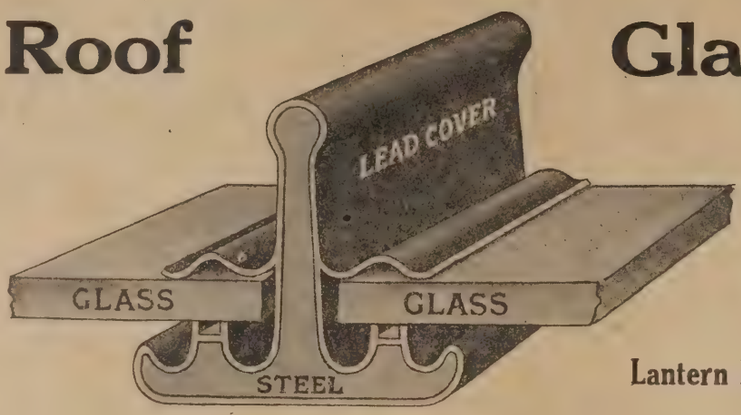

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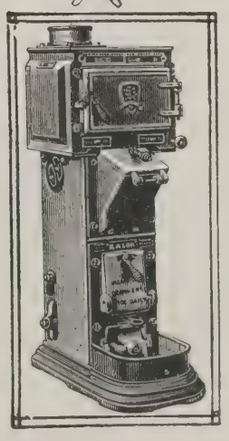

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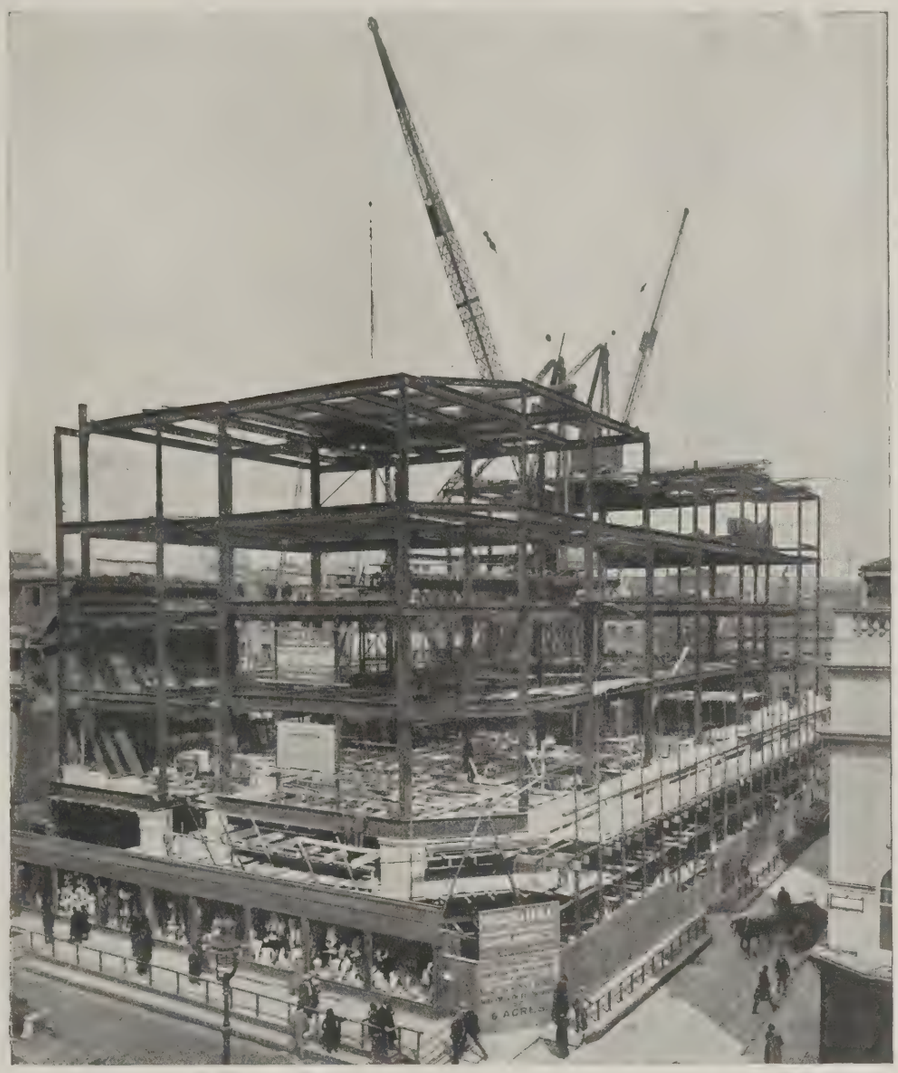

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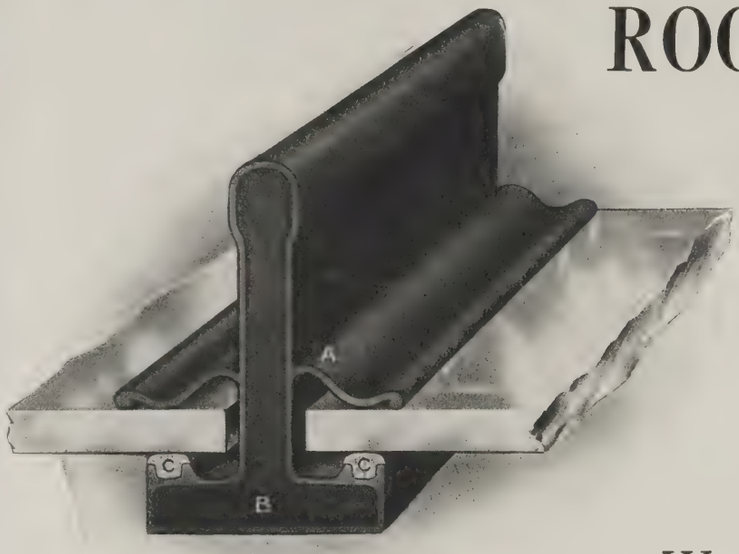

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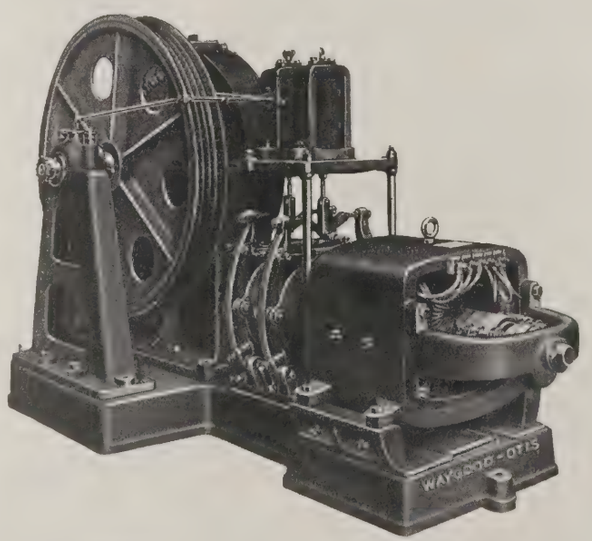

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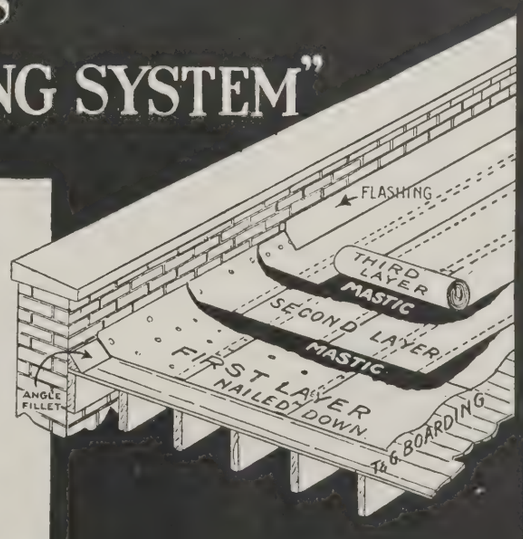

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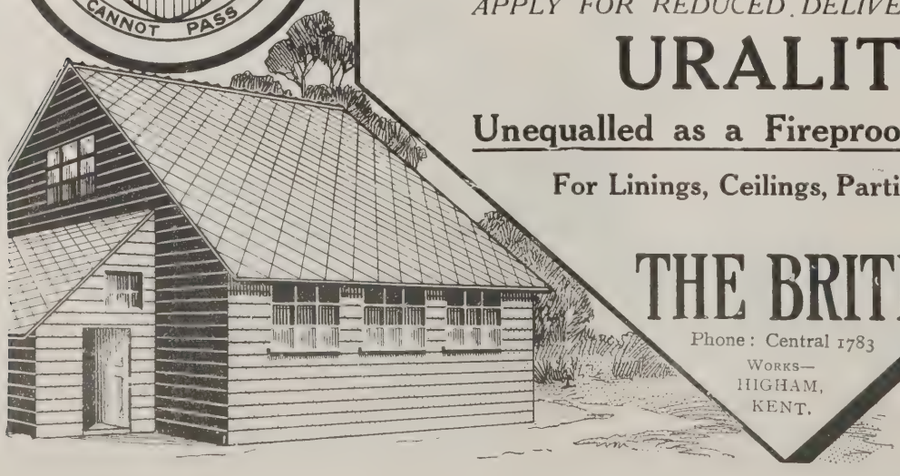

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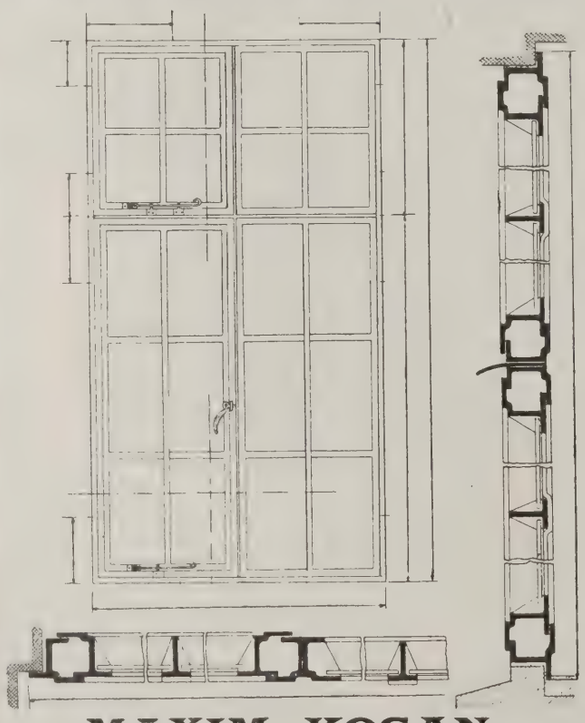

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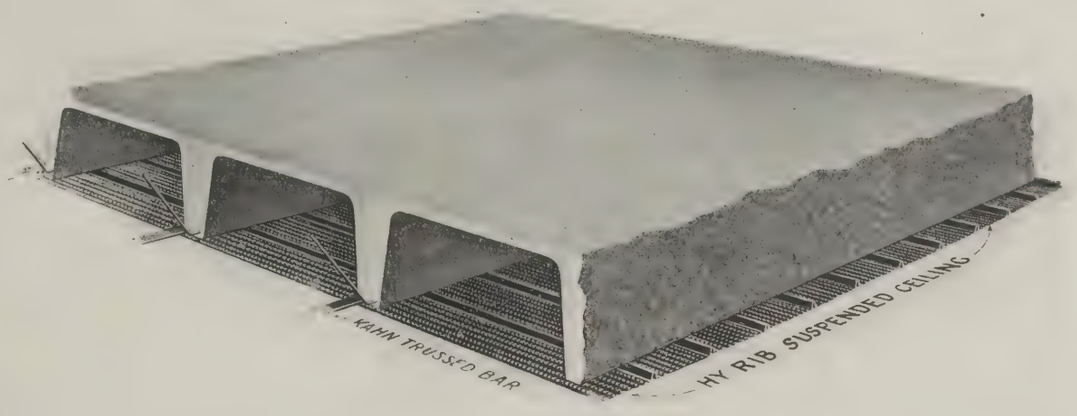

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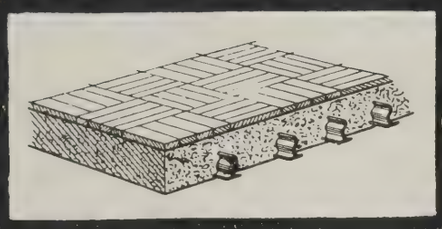

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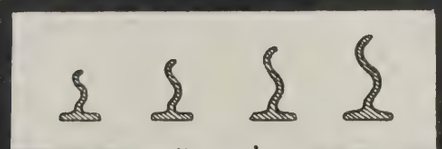

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BUILDING.

June 29.—**STEEL-FRAME BUILDINGS. South Africa.**—Steel-frame buildings for power-station in connection with electrification of Glencoe-Pietermaritzburg section of the South African Railways. Apply High Commissioner for the Union of South Africa, Trafalgar Square, W.C.2.

June 29.—**COTTAGES. Titchfield.**—Erection of two pairs of cottages, piggeries, &c., at Titchfield. Apply Mr. A. L. Roberts, County Architect, The Castle, Winchester. Deposit £1 1s.

June 29.—**REFLOORING. Heptonstall.**—Reflooring billiard room, also certain other alterations, at Heptonstall Mechanics' Institute. Apply Mr. J. H. Walton, Secretary.

June 29.—**FARM BUILDINGS. Littlehempston.**—Erection of a small set of farm buildings (wood and iron) at Gatcombe Park Farm, Littlehempston (adjoining main road), for Mr. Hamilton Coffey. Apply Mr. W. F. Tollit, Architect, Bridgetown, Totnes.

June 29.—**CONVERTING. Manchester.**—Conversion of existing building into shelter at St. George's Park, Hulme, for the Parks and Cemeteries Committee. Apply City Architect, Town Hall. Deposit 10s. 6d.

June 29.—**HOUSES. Rothwell.**—Erection of houses on the following sites, for the Rothwell Urban District Council: Carlton site, 6 houses; Thorpe site, 6 houses; with an alternative price of the 12 houses were built at Rothwell Haigh. Apply Messrs. Jones and Stocks, 56 Prudential Buildings, Leeds. Deposit £1 1s.

June 30.—**EXTENSION. Sleaford.**—Extension of the present conveniences and the erection of a bicycle shed, for the Governors of Carre's Grammar School, Sleaford. Apply Mr. C. B. Metcalfe, A.R.I.B.A., County Architect, Jermyn Street, Sleaford.

June 30.—**MEMORIAL. Bangor.**—Erection of North Wales Heroes' Memorial, for the University College of North Wales, Bangor. Apply Major W. P. Wheldon, D.S.O., M.A., University College of North Wales, Bangor, by June 30.

June 30.—**ALTERATIONS. Evesham.**—Alterations to premises, 18 and 19 High Street, Evesham (corner of Avon Street), preparatory to street widening, for Mr. F. Gegg and the Evesham Town Council. Application, accompanied by a deposit of £1 1s., to Mr. H. E. Dicks, M.S.A., Architect, 1 Market Place, Evesham, by noon on June 30.

June 30.—**BOILER-HOUSE. Stratford-on-Avon.**—Erection of a new boiler-house and foundation work at the gasworks, for the Town Council. Apply Mr. F. Shewring, Engineer and Manager, Gasworks, Birmingham Road. Deposit £2 2s

June 30.—**REPAIR. Panteg.**—Repair, alteration and adaptation of existing buildings as follows, for the Monmouthshire Agricultural Committee:—(a) Farm buildings on holding No. 4, Sluvad Farm, Panteg; (b) farm buildings on holding No. 5, Sluvad Farm, Panteg (these farms are about two miles from Pontypool Road Station); and (c) farmhouse and buildings known as "Old Llanishen No. 1," in the parish of Llanishen, about five miles from Usk. Apply Mr. A. Every-Clayton, County Land Agent, 2 Gold Tops, Newport, Mon.

June 30.—**COTTAGES. Crick.**—Erection of (a) a detached cottage, "Type K2," on holding St. Pierre No. 11, which is situate about half-mile from the village of Crick, near Chepstow; (b) a detached cottage, "Type K2," on holding Great House Farm No. 16, which is situate near the village of Caerwent, near Chepstow; (c) a small set of farm buildings, "Type S," on holding St. Pierre No. 13, situate near the Crossway, about one mile from Portskewett Station, for the Monmouthshire Agricultural Committee. Apply Mr. A. Every-Clayton, County Land Agent, No. 2 Gold Tops, Newport, Mon.

June 30.—**ALTERATIONS. Pembroke.**—Carrying out of certain alterations and converting outbuildings into a dwelling-house at the Point, Hakin, belonging to Mr. Munning. Apply Mr. H. V. Elford, Architect and Surveyor, Milford Haven.

June 30.—**BATHS. King's Heath and Harborne.**—Erection of baths at King's Heath and Harborne, for the Baths Committee of the Birmingham Corporation. Conditions of contract include the fair wages and conditions of labour clause. Apply Messrs. Crouch, Butler and Savage, 67a New Street, Birmingham. Deposit £2.

July 1.—**COTTAGES. Sherburn.**—Erection of six cottages at Sherburn Village, for the Durham Aged Mineworkers' Homes Association. Apply Mr. F. Charlesworth, Heather View, Littletown, Durham.

July 1.—**INFIRMARY. Christchurch.**—Erection of an infirmary at their institution, Fairmile House, Christchurch, for the Guardians. Apply Fairmile House. Deposit £5.

July 3.—**HOUSES. Glasgow.**—For the following works required in connection with proposed erection of 348 tenement houses at Hamilton Hill, Possilpark, for the Corporation, viz.: (1) Excavator, mason, and brick works; (2) carpenter, joiner, and ironmonger works; (3) slater work; (4) plumber and gasfitter works; (5) plaster work; and (6) glazier work. Apply Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

July 3.—**HOUSES. Halifax.**—Erection of 32 scullery houses at Wakefield Road, and 12 parlour and 8 scullery houses at Booth Town. Apply Mr. A. C. Tipple, Borough Engineer, Town Hall, Halifax. Deposit £2 2s.

July 3.—**HOUSES. Swindon.**—Erection of 50 houses in connection with the Hurst Farm housing scheme. Apply Mr. S. C. Baggott, 34 Regent Circus.

July 3.—**SHELTERS. Southend-on-Sea.**—Erection and completion of two shelters on the Eastern Esplanade, Thorpe Bay, for the Corporation. Apply Mr. R. H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

July 3.—**COLD STORE. Nottingham.**—Erection of cold store and ice-making plant at the Bagthorpe Institution and Infirmary, for the Guardians. Apply Mr. J. A. Battersby, Clerk, Poor Law Offices, Shakespeare Street, Nottingham.

July 3.—**CONVERTING. Bristol.**—Conversion of an existing timber and galvanized sheet-iron building into new pay and time offices, for the Docks Committee. Apply Mr. T. A. Peace, Engineer, Avonmouth Docks. Deposit £2. Cheques must be made payable to "The Bristol Docks Committee," and forwarded to the General Manager and Secretary, Dock Office, 19 Queen Square, Bristol.

July 4.—**SORTING OFFICE. Brighton.**—Erection of a sorting office and telephone exchange at Brighton. Apply Clerk of Works on the site, North Road, Brighton, and Contracts Branch, H.M. Office of Works, King Charles Street, London, S.W.1.

July 4.—**HOUSES. Barking.**—Erection of 40 houses of various types on the Greatfields Estate, Ripple Road, Barking, for the Barking Town Urban District Council. Apply Mr. C. J. Dawson, F.R.I.B.A., Clock House Chambers, East Street, Barking. Deposit £2.

July 4.—**SCHOOLROOM. Pulham Market.**—Erection of new Wesleyan schoolroom, Pulham Market. Apply Mr. L. M. Blackburn, Pulham Market, Norfolk.

July 4.—**WALL. Salisbury.**—Erecting a boundary wall, &c. at St. Nicholas's Road, for the Town Council. Apply Office of the City Engineer and Surveyor, Municipal Offices, Salisbury.

July 4.—**REPAIRS. Tunbridge Wells.**—Work to be executed to the outside of the club and institute building in Camden Road, for the Tunbridge Wells Friendly Societies' Club and Institute. Apply Mr. T. E. Collins, Secretary.

July 4.—**HOUSES. Cork.**—Construction of 56 houses in one or several lots at Wycherley site, Cork, for the Corporation. Apply Messrs. W. H. Hill and Son and Flanagan, Architects, 28 South Mall, Cork. Deposit £1.

July 5.—**WALL. Earby.**—Erection of the boundary wall and entrance gates at the War Memorial Gardens, Sough, for the Earby War Memorial Committee. Apply Mr. J. E. Aldersley, Hon. Surveyor to the Committee, Council Offices, Earby.

July 5.—**ADDITIONS. Machynlleth.**—Additions to the Drill Hall at Machynlleth and for the refixing of a miniature range hut, for the Montgomeryshire Territorial Force Association. Apply Messrs. Davies and Hill, Architects and Surveyors, Severn Square, Newtown.

July 6.—**DRILL HALL. Rhosllanerchrugog.**—Erection of a drill hall and miniature range at Rhosllanerchrugog, for the Denbighshire T.A. Association. Apply Captain G. Griffith, O.B.E., Post Office Lane, Denbigh.

July 10.—**RENOVATION. Bridgwater.**—Internal renovation of the following buildings, for the Borough Education Authority, viz.: Albert Street Council School; master's house, Eastover Council School; Eastover Parochial School; Girls' and Infants' C. E. School, Mount Street; and West Street C.E. School. Apply Borough Surveyor, Municipal Buildings, Bridgwater.

July 10.—**COTTAGES. Sealand.**—Erection of four cottages at Waterloo Farm, Sealand, near Chester, for the Corporation of Wallasey. Apply Mr. G. Livsey, Town Clerk, Town Hall, Wallasey. Deposit £1 1s.

July 12.—**EXTENSIONS. Stepney.**—Extensions and alterations to the Limehouse electricity generating station, Narrow Street, Limehouse, E.14, composed of steel framing and reinforced concrete, for the Stepney Borough Council. Rates of wages, &c., clauses to be observed. Apply Mr. B. J. Belsher, A.M.I.C.E., M.I.M.E., Municipal Offices, Raine Street, Old Gravel Lane E.1. £5 Bank of England Note.

July 13.—**BUNGALOWS. Esh Winning.**—Erection of bungalows as follows: Eight bungalows at Esh Winning, 10 bungalows at Langley Park, 14 bungalows at Lanchester, for the Lanchester Rural District Council. Apply Mr. T. E. Taylor, L.R.I.B.A., Union Offices, Lanchester.

July 14.—**ALTERATIONS. Lowestoft.**—Alterations, improvements, and renovation of Victoria Road School, Lowestoft, for the Education Committee. Apply Borough Surveyor's Office, Town Hall, Lowestoft.

ELECTRICAL.

June 30.—**MOTORS. Barming Heath.**—Dismantling and disposal of certain steam engines and the provision and erection of two three-phase back-geared electric motors, two centrifugal pumps and accessories, including the necessary main switchboard, starting and controlling gear and wiring at the Kent County Mental Hospital, Barming Heath, Maidstone. Apply Messrs. Handcock and Dykes, 11 Victoria Street, Westminster, S.W.1. Deposit £2 2s.

June 30.—**ELECTRIC LIGHTING. Glasgow.**—Electric lighting installation of Belvidere Hospital, London Road, for the Corporation. Apply Electrical Engineer, 75 Waterloo Street. Deposit £2 2s.

June 30.—**TRANSFORMERS. Manchester.**—Supply, delivery, and erection at the Middleton sub-station of two 3,000 k.v.a., 3-phase, "Outdoor," weatherproof type transformers, or alternatively, two 3,000 k.v.a. 3-phase, "Indoor" type transformers, with the necessary fans and accessories, for the Electricity Committee. Apply Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester. Deposit £1 1s.

July 3.—**ELECTRIC CLOCK. Nottingham.**—Installation of an electric clock system at their Bagthorpe Institution and Infirmary, Nottingham, for the Guardians. Apply Mr J. A. Battersby, Clerk, Poor Law Offices, Shakespeare Street, Nottingham.

July 3.—**SWITCHGEAR. Salford.**—Supply, delivery, and erection complete of extra-high-tension and low-tension switchgear and transformers for the Agecroft power station, for the Electricity Department. Apply Borough Electrical Engineer, Electricity Works, Frederick Road, Salford. Deposit £2 2s.

July 4.—**TRANSFORMERS. Waikato.**—Manufacture, supply, and delivery, c.i.f. Auckland, of three 1,320 k.v.a. single-phase transformers complete with accessories in accordance with the specification. (Section 56.) Apply Department of Overseas Trade (Room 49), 35 Old Queen Street, London, S.W.1.

July 5.—**BATTERY TRUCK. Melbourne.**—Supply and delivery of an industrial storage battery truck and battery charging equipment. (Contract No. 35028). Apply Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.

July 10.—**METERS. Cheadle.**—Supply of alternating current meters (2½ to 20 amperes) and maximum demand indicators (3 hectowatts to 5 kilowatts), for the Cheadle and Gatley Urban District Council. Apply Mr. C. H. Wordingham, C.B.E., M.I.C.E., 11 Mosley Street, Manchester, or 7 Victoria Street, Westminster, London, S.W.1. Deposit 10s. 6d. each specification.

ENGINEERING

June 29.—**UNDERPINNING. White Wells.**—Underpinning the west abutment, &c., of Burholme Bridge, situate about 10 miles north-west of Clitheroe and near White Wells, for the West Riding Highways Committee. Apply Mr. H. R. Hepworth, West Riding Surveyor, County Hall, Wakefield. Deposit £1.

June 29.—**WELL. St. Austell.**—Further sinking of Hallaze well from its present depth of 55 ft. to a depth of approximately 100 ft., and for drawing a level approximately 30 ft. in length, for the St. Austell Rural District Council. Size of existing shaft 8 ft. by 5 ft. 6 in. Apply Mr. A. T. Green, Hepworth's Chambers, St. Austell.

June 30.—**BOILER. Stratford-on-Avon.**—Erection of (1) Lancashire boiler and setting for same and (2) chimneystack at the gasworks, for the Town Council. Apply Mr. F. Shewring, Engineer and Manager, Gasworks, Birmingham Road. Deposit £2 2s.

July 1.—**PUMPING ENGINE. Croydon.**—Supply, fixing and setting to work of a steam pumping engine at the Surrey Street waterworks, for the Town Council. Apply Borough Engineer's Office, Town Hall, Croydon. Deposit £1 1s.

July 1.—**PIPELINE. Winscombe.**—For the following works at Winscombe, Somerset, in connection with their water supply, for the Burnham-on-Sea Urban District Council: (Contract No. 1) Supply of about 3,711 yards of 12 in. cast-iron pipes, together with valves and special fittings; (2) cartage and delivery of the above pipes from Winscombe Station to the pipeline between Winscombe and Webbington; and (3) excavation for laying and jointing of above pipes. Apply Council's Engineer, Mr. W. H. Chowins, Burnham-on-Sea. Deposit £2.

July 3.—**PIPES. Stafford.**—Supply and delivery of about 240 tons of 12 in. diameter cast-iron pipes, for the Corporation. Apply Mr. W. Plant, A.M.I.C.E., Borough and Waterworks Engineer, Borough Hall, Stafford.

July 3.—**WATERWORKS. Stafford.**—Carting, laying, and jointing of about 3,400 yards of 12 in. diameter cast-iron pipes and special castings and other works in connection therewith, for the Corporation. Apply Mr. W. Plant, A.M.I.C.E., Borough and Waterworks Engineer, Borough Hall, Stafford. Deposit £2 2s.

July 3.—**TANK. Matlock.**—Supply and delivery of one cast-iron and pressed steel water storage tank of one cast-iron and pressed steel water storage tank of 5,000 gallons capacity, for the Matlock Urban District Council. Apply Mr. J. Turner, Surveyor, Town Hall, Matlock.

July 4.—**BOILER. Bray.**—Supply and delivery at Bray of a mild steel vertical cross-tube steam boiler for harbour crane (new or secondhand), 7 ft. high, 3 ft. 6 in. diameter, with two 7 in. diameter cross tubes, with stop valve, safety valve, pressure gauges, manlid, cleaning doors, and all other necessary fittings and chimney complete. Boiler to be constructed for a working pressure of 120 lb. per square inch, and to be tested by hydraulic pressure to 220 lb. per square inch, for the Bray Urban District Council. Apply Mr. J. McCaull, Clerk, Town Hall, Bray.

(*Continued on page* xxiv.)

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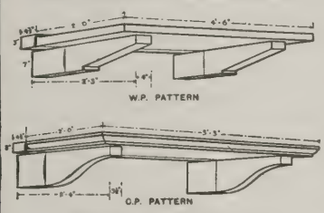

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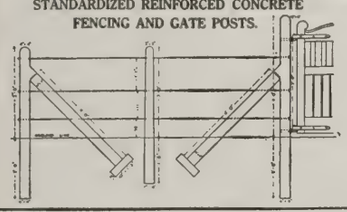

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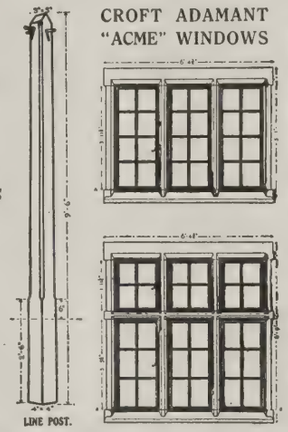

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July 5.—**FITTINGS. South Molton.**—For supplying best quality water pipe and fittings as follows: 340 yards of 2 in., 28 lb. per yard; 450 yards of 3 in., 41 lb. per yard; 6 sluice valves, 2 in.; 4 sluice valves, 3 in., best quality, fitted with 4 gunmetal faces; 10 heavy sluice valve covers, hinged; 24 stop-cock boxes, flanges under; 1 strong airtight manhole cover, 30 in. by 36 in., with locking gear; 24 strong step-irons, galvanized, delivered free at Molland Station, G.W. Railway, for the South Molton Rural District Council. Apply Mr. W. S. Gardner, Surveyor, Chittlehampton, Devon.

July 8.—**DISTRIBUTORS. Macclesfield.**—Supply and erection at their Butley sewage disposal works of four revolving distributors for their existing 120 ft. diameter filters, for the Corporation. Apply Mr. J. H. Edmondson, Sewage Manager, Prestbury, near Macclesfield.

July 10.—**MECHANICAL STOKERS. Ilford.**—Supply, delivery, and erection of mechanical stokers on two marine dryback boilers, for the Ilford Urban District Council. Apply Mr. A. H. Shaw, Electricity Works, Ley Street, Ilford.

July 10.—**CONVERTING PLANT. Kirkcaldy.**—For the following, for the Town Council: Specification No. 2—Converting plant. Apply Messrs. Kennedy and Donkin, 17 Victoria Street, Westminster, S.W.1. Deposit £2 2s. (cheque, postal, or money order).

July 11.—**TRANSMISSION LINE TOWERS. Lyttleton.**—Supply and delivery ex. ship's slings, Lyttleton, New Zealand, of eight galvanized steel transmission line towers complete with cross-arms, stubs, and all accessories, in connection with the Lake Coleridge electric supply scheme. Apply Department of Overseas Trade (Room 49), 35 Old Queen Street, Westminster, S.W.1.

July 11.—**WHEELS AND AXLES. Edinburgh.**—Supply and delivery of wheels and axles for 80 electric cars, for the Tramway Department. Apply Tramways Manager, 2 St. James Square, Edinburgh.

July 14.—**SEWAGE WORKS. Haslingden.**—Construction of detritus tanks, carriers, storm tanks, buildings, and other works at their sewage works at Ewood Bridge, Lancashire, for the Haslingden, Rawtenstall, and Bacup Outfall Sewerage Board. Apply Mr. G. Midgley Taylor, of Messrs. J. Taylor and Sons, 36 Victoria Street, Westminster, S.W.1. Deposit £5 (cheque only).

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June 29.—**PAINTING. Stockton-on-Tees.**—Painting the ironwork on the underside of the arch on the Stockton side of the river, and also the centre arch, together with parapets and spandrils, of the Victoria Bridge, Stockton-on-Tees, for the Bridge Board. Apply Mr. J. P. Wakeford, M.I.C.E., Engineer to the Board, Victoria Buildings Stockton-on-Tees.

June 29.—**PAINTING, &c. Acton.**—Painting and repairs to existing fencing and iron railings at Acton Green, for the Acton Town Council. Apply Mr. W. Hodson, Town Clerk, Municipal Offices, Acton, W.3.

June 29.—**PAINTING. Edinburgh.**—Painter work to be carried out at George Heriot's School, the Heriot-Watt College and the Trust Offices, for the governors of George Heriot's Trust. Apply Mr. J. Anderson, F.S.I., Superintendent of Works, 20 York Place.

June 29.—**PAINTING. Sowerby.**—Painting and decorating the inside and outside of Boulderclough United Methodist Church and Sunday School, Sowerby. Apply Mr. M. Hall, Architect and Surveyor, 1 Harrison Road, Halifax.

June 30.—**RENOVATING. Newtownhamilton.**—Renovating the Parish Church, Newtown hamilton, Co. Armagh. Apply Mr. J. Cooke, Dundalk Street, Newtownhamilton.

July 1.—**PAINTING. Cambridge.**—For painting distempering, &c., of any or all of the following schools, for the Education Committee, according to specifications which may be seen at the office of the Borough Surveyor, Guildhall, Cambridge:—Council Schools—Central, Melbourne Place; the Clinic, 35 Park Side; dining centre and caretaker's house, Eden Street; Open-air, Vinery Road, Non-provided Schools—Barnwell Abbey C.E.; Barnwell (East Road); Park Street C.E. Occupation Road C.E. Infants'; St. Giles' C.E. Infants'; St. Luke's C.E. Boys' Girls' and Infants'; St. Paul's C.E. Girls'; St. Philip's C.E. Boys'; and Union Road R.C. Apply Borough Surveyor.

July 1.—**PAINTING. Ebbw Vale.**—For the following works, for the Ebbw Vale Education Committee:—(Contract A) Painting and colouring inside and outside of Pontygof Girls' School, Ebbw Vale, and (B) painting outside of Victoria School, Ebbw Vale. Apply Surveyor, Council Offices, Ebbw Vale, Mon.

July 3.—**PAINTING. Paddock.**—For the painting of the outside of Paddock Church schools, for the Managers. Apply Caretaker, Lark Street, near Girls' School.

July 3.—**CLEANING AND PAINTING. Brinscall**—Cleaning and painting of eight girders and cross-ties (part of gas plant at the gasworks), for the Withnell Urban District Council. Red oxide paint to be used. Apply Gas Manager at the works.

July 3.—**PAINTING. Swansea.**—Internal painting of the following six Council schools during August, for the Education Committee, viz.:—Cwmbwrla Boys', Dunvant, Glais, Peniel Green (Neath Road and Bethel Road), St. Thomas, and Wann Wen. Apply Borough Architect, 3 Prospect Place.

July 4.—**PAINTING. Beddington.**—Painting and decorating work at the house occupied by the superintendent on the Stafford Road Recreation Ground, Beddington, for the Beddington and Wallington Urban District Council. Apply Mr. S. F. R. Carter, A.M.I.C.E., Engineer and Surveyor, Council Offices, Wallington.

July 11.—**PAINTING. Walthamstow.**—Carrying out certain work of school renovations in painting, distempering, &c., to the interiors of the following schools for the Walthamstow Education Committee, viz.:—William Morris School, Mission Grove School and Joseph Barrett School. Apply Mr. H. Prosser, M.S.A., Architect to the Committee, 263 High Street, Walthamstow, E.17.

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June 29.—**TAR MACADAM WORK. Edinburgh.**—Laying of the playground at George Heriot's School, Lauriston Place, Edinburgh, with tar macadam, for the governors of the George Heriot's Trust. Apply Mr. J. Anderson, F.S.I., Superintendent of Works, 20 York Place, Edinburgh.

June 29.—**MAKING-UP. Ramsgate.**—Making-up of Cecilia Road under Section 150 of the Public Health Act, 1875, for the Corporation. Apply Borough Engineer's Office.

June 30.—**SEWER. Cowdenbeath.**—Construction of a reinforced concrete sewer, for the Town Council. Apply Burgh Surveyor, Town House, Cowdenbeath.

July 1.—**SEWER EXTENSION. Thornton-le-Fylde.**—Extension of the main sewer in the Rossall Road, for the Thornton Urban District Council. Approximate length, 145 yards, 12 in. diameter. Apply Mr. H. Fenton, Surveyor, Council Offices, Thornton-le-Fylde. Deposit £1.

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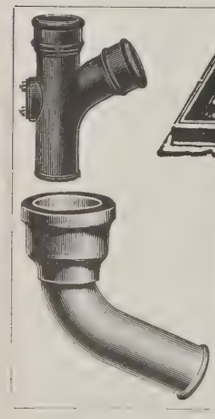

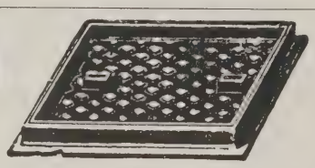

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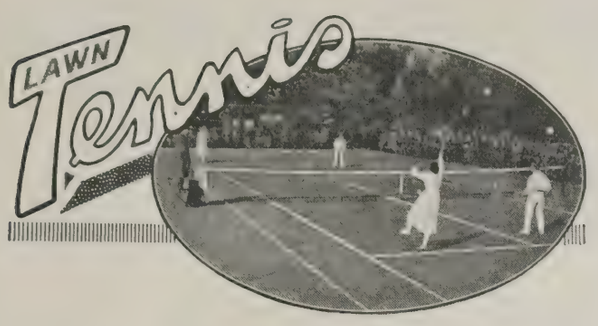

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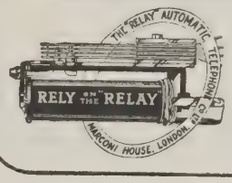

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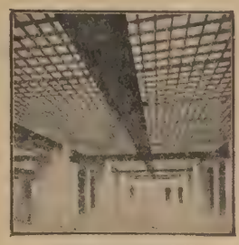

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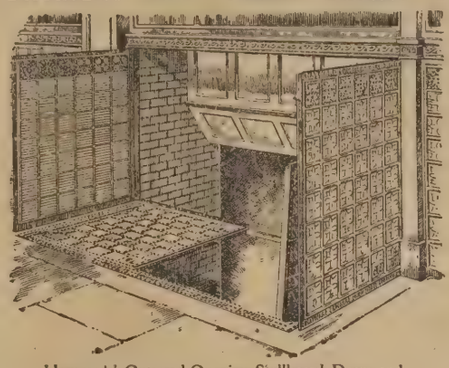

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